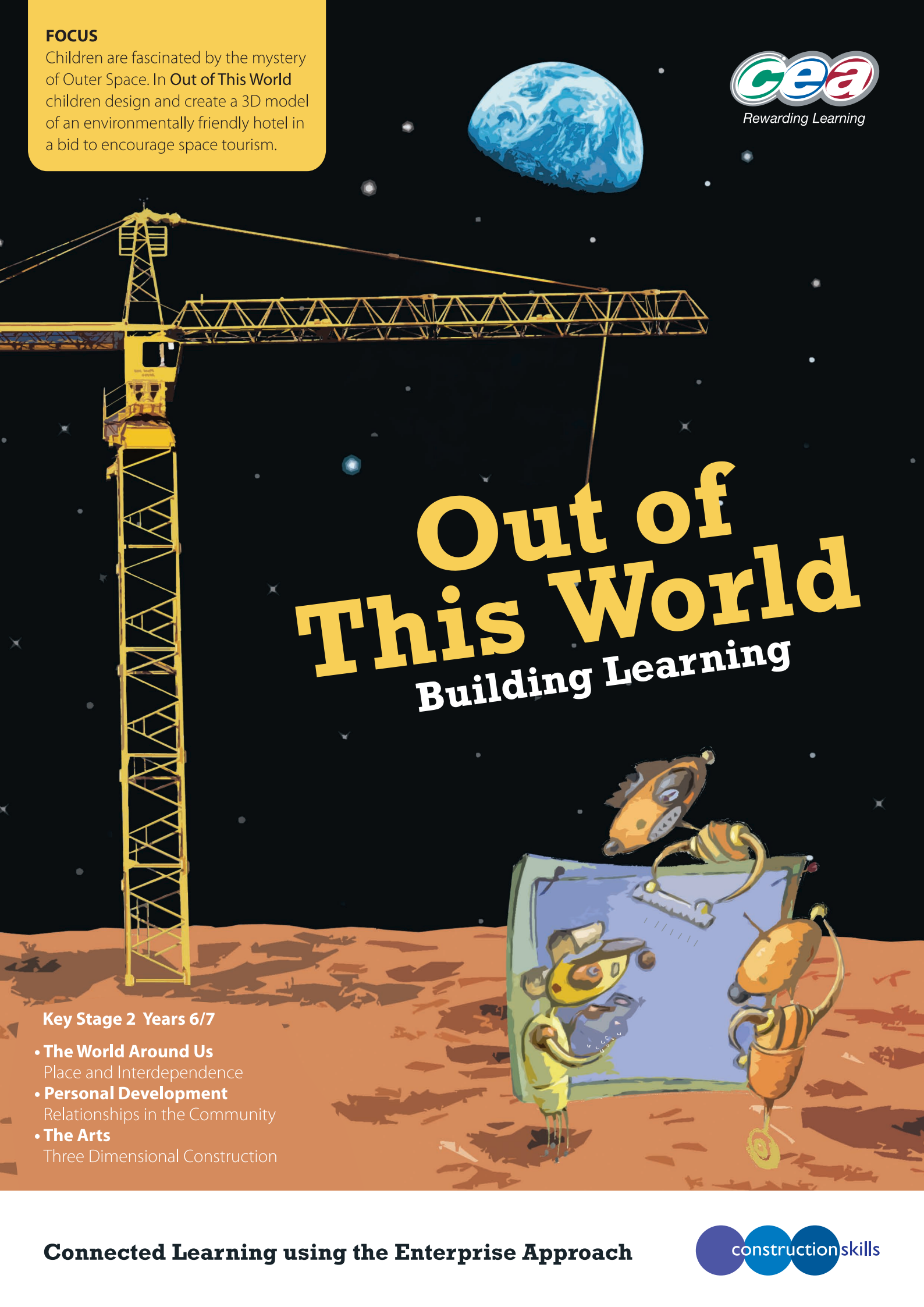
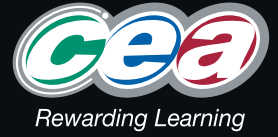


FOCUS

Children are fascinated by the mystery of Outer Space. In **Out of This World** children design and create a 3D model of an environmentally friendly hotel in a bid to encourage space tourism.



Out of This World

Building Learning

Key Stage 2 Years 6/7

- **The World Around Us**
Place and Interdependence
- **Personal Development**
Relationships in the Community
- **The Arts**
Three Dimensional Construction

Connected Learning using the Enterprise Approach



Enterprise can be associated with the creation of new ideas and by turning those ideas into reality. It is often misconceived as being only about the creation of profit. People working in committees, councils and other community organisations need the same enterprising attributes as those in paid employment.

The Enterprise Approach can be characterised by the following Four R's:

Realising Ideas

Children see how they are able to turn their ideas into a reality. The project becomes real for the children when they have a real audience/customer.

Roles

Children learn to work in groups to reach agreement. They take on various roles within the enterprise, for example designing logos and posters.

Risk-Taking

Children are provided with opportunities to enjoy the unexpected or surprising, experience the 'not knowing the outcome' element of enterprise, and become willing to take on new challenges.

Responsibility

Children have ownership of the project, as it is generated by their ideas. They make decisions and are actively involved in carrying out the tasks.

In this resource, developed by CCEA for the CITB, children are able to show enterprising attributes as they generate creative ideas and organise a presentation for a real audience. They are also provided with opportunities to carry out their actions with some degree of uncertainty.

Out of This World activities equip children with a 'can do' attitude as they are able to see their ideas and visions come to life in the form of a 3D model and presentation.

To find out more about using the *Enterprise Approach* visit the 'From Little Acorns' micro-site: www.ccea.org.uk/fla

Acknowledgement

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CCEA would also like to thank the following people for their contributions to the development of this resource:
 Darren Mullan, St. Patrick's Primary School, Dungannon
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 Neil Campbell, St. John's Primary School, Moy.

About this Resource

The *Out of This World* resource has been developed to be used across the curriculum, and as such, highlights the ways in which the learning within the materials is closely aligned to the statutory requirements of the Revised Northern Ireland Curriculum.

The materials encourage a connected approach to learning that requires active participation by children. There is an explicit emphasis on the opportunities provided for the development of Thinking Skills and Personal Capabilities. Children are encouraged to use an enterprising approach throughout the theme.

This resource has been developed for Years 6 and 7 teachers in Northern Ireland and its primary aim is to foster a positive impression about the Construction Industry amongst children. In addition, the materials will promote an awareness of some familiar and non-familiar roles within the construction industry. However, it is not intended to guide primary school children in considering future careers.

Out of This World encourages schools to engage with their local community in order to provide enriching learning experiences that enable children to see the relevance of school and the world in which they live.

It is important to note that many of the home learning suggestions set the context for the next Unit of learning.

The materials are designed in Units. Each Unit is linked to the overall sequence of the theme. The Units do not represent lessons but are connected by shared learning intentions. Flexibility has been built in to facilitate choice and room for adaptation depending on the needs and interests of individual schools and their children. Schools could adopt this theme as a cross-curricular half-term plan as there is scope to develop learning in a range of areas for approximately six to eight weeks.

The following chart provides an outline for the learning opportunities that exist within this resource and illustrates how it has been closely aligned to the Revised Northern Ireland Primary Curriculum

Curriculum Aim	The Northern Ireland Curriculum aims to empower young people to achieve their potential and to make informed and responsible decisions throughout their lives...		
Curriculum Objectives	<p>to develop the young person as an individual</p> <p>Personal and Mutual Understanding</p> <ul style="list-style-type: none"> • develop self-confidence, self-esteem and self discipline; • develop their motivation to learn, and their individual creative potential; • listen to and interact positively with others; 	<p>to develop the young person as a contributor to society</p> <p>Media Awareness</p> <ul style="list-style-type: none"> • be aware of, and use, information available to us through all sorts of media; 	<p>to develop the young person as a contributor to the economy & environment</p> <p>Employability</p> <ul style="list-style-type: none"> • develop their aptitudes, abilities and creativity; • be willing to take calculated risks when appropriate; • use critical and creative thinking to solve problems and make decisions. <p>Education for Sustainable Development</p> <ul style="list-style-type: none"> • appreciate the environment and their role in maintaining and improving it; • understand how actions can affect the environment.

SKILLS DEVELOPMENT

<p>Thinking Skills and Personal Capabilities focus</p> <p>Working with Others:</p> <ul style="list-style-type: none"> • Become more independent in their social and interpersonal skills. • Show that they can work in different roles in a group and take responsibility for appropriate tasks. • Work with their peers to reach agreements and begin to manage disagreements. <p>Thinking, Problem Solving and Decision Making:</p> <ul style="list-style-type: none"> • Explain and justify methods, opinions and conclusions. • Examine options and weigh up pros and cons. • Try alternative problem solving solutions and approaches. 	<p>Communication Skills developed across the topic</p> <p>Children will have opportunities to:</p> <ul style="list-style-type: none"> • Take part in discussions, show understanding and explore and develop ideas. • Talk for different purposes using a widening vocabulary. • Respond appropriately to others' points of view. • Present and communicate work in a variety of ways, showing some awareness of audience and purpose. • Use a widening range of sources to locate and use relevant information. • Identify the main features of texts and how these are linked to the type and purpose of text. 	<p>Using Mathematics Skills developed across the topic</p> <p>Children will have opportunities to:</p> <ul style="list-style-type: none"> • Identify and collect information required for a task, initially with teacher support. • Choose a format to record work and give reasons for the choice. • Suggest how to present findings, using both mathematical language and prose, <i>for example, using a data collection sheet.</i> 	<p>ICT Skills developed across the topic</p> <p>Children will have opportunities to:</p> <ul style="list-style-type: none"> • Select, with some independence, the appropriate electronic sources, resources and means of presentation. • Research and select assets to support a topic. • Process found or self-produced assets, which may include text, number, sound, still or moving images. • Combine these to create, present and communicate their work, showing an awareness of audience and purpose.
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SUGGESTED LEARNING INTENTIONS across the curriculum

<p>The WORLD AROUND US</p> <ul style="list-style-type: none"> • Know that properties of materials are related to their uses. • Recognise how we are interdependent with others. • Understand that a plan guides the process. • Understand some of the ways that inventions and discoveries have made an impact on our world. • Know some of the ways people's actions can improve the environment. • Be aware of differences that exist between places. 	<p>PERSONAL DEVELOPMENT</p> <ul style="list-style-type: none"> • Understand that there is a difference between needs and wants. • Know that we all have personal preferences and aspirations. • Be aware of own strengths and qualities. • Know about some simple safety rules and strategies. • Be aware of the elements of advertising in order to persuade or engage attention. 	<p>THE ARTS</p> <ul style="list-style-type: none"> • Understand and appreciate that people respond in different ways to a range of stimuli. • Know some 3D modelling techniques.
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Units 1 - 3 Setting the Scene

1
Alien E-mail
The Construction Industry

2
Whose Job is it Anyway?
Who Works in the
Construction Industry?

3
Class-ified Ads!
Corporate Identity

Units 4 - 6 Thinking about the Challenge

4
Calling Planet Earth
Designing and Carrying out
Market Research

5
Earth to Mars
Analysing Feedback

6
Blast Off!
The Design Process

Units 7 - 9 Making Dreams Come True

7
Martian Models
Design and Make 3D Models

8
Hotel Hype
Prepare Proposal
Presentation

9
Selling Space
Presentation of Bid
Signing the Contract

Unit 1 Alien E-mail

The Construction Industry

The purpose of this Unit is to set the context for this theme. It introduces the children to the task they are being set and outlines what they will be doing.

Resources

- Collection of same size boxes, for example, shoe boxes
- E-mail from Outer Space (sample included in Appendix 1)
- Sticky labels
- 'Know, Want to know and have Learned' (KWL) grid represented on A1 sheet of paper (illustration included in Appendix 2)
- Markers

Suggested Learning Intentions

- Recognise how we are interdependent with others.

Suggested Success Criteria

- Talk about some of the ways in which we rely on the Construction Industry.

Suggested Activities

Share the e-mail from Outer Space with the class (sample included in Appendix 1).

Alternatively, set up an e-mail account with 'alien' forming part of the username. Send the e-mail to the class. This would allow the children to set up ongoing communication with the 'aliens'. A new e-mail at the beginning of each unit would act as a stimulating starting point.

Clarify that the aliens need help from an earthling Construction Company to design and build a hotel on their planet in an attempt to promote Space Tourism. Explain to the children that over the coming weeks they will be:

- forming a Construction Company;
- designing a hotel for the aliens;
- making a 3D model of their design;
- presenting a bid for the contract.

Ask children to form small groups and use sticky labels and some thinking time to write down what they believe they already know about the Construction Industry. Place a KWL grid (see Appendix 2) on the wall and invite each group to place their ideas under the letter 'K'.

As a whole class discuss the following question: 'What does the Construction Industry mean to us?'

Encourage children to think about any gaps they have in their knowledge and create a shared list in the 'W' section of the grid to identify some of things they want to find out.

As the children progress through the theme they should revisit the grid to contribute to the final column, indicating what they have learned.

Another Brick in the Wall

Using the boxes collected ask children to construct a vocabulary wall which will illustrate all the new vocabulary as it is introduced throughout this topic.

How many bricks (boxes) will be used by the end of the topic? What will we do if the wall falls? How can we stop it from falling?

Home Learning

Compose and send an e-mail to the alien acknowledging that you received their e-mail and are going to undertake the challenge.

Find out if anyone you know works in the Construction Industry.

Unit 2 Whose Job is it Anyway?

Who Works in the Construction Industry?

The purpose of this unit is for the children to familiarise themselves with some of the roles and responsibilities within the Construction Industry.

Resources

- Sticky labels
- Set of job title cards for each group (included in Appendix 3)
- Set of job description cards for each group (included in Appendix 4)
- Research guide template (sample included in Appendix 5)

Suggested Learning Intentions

- Recognise how people are interdependent.
- Understand that a plan guides the research process.
- Know about some safety rules and strategies.

Suggested Success Criteria

- Match fifteen job roles with their descriptions.
- Explain why at least three of these jobs are important in the Construction Industry.
- Use a plan to follow research.
- Talk about three things that people need to do on a building site in order to keep safe. (Health and Safety cards included in the resource).

Suggested Activities

Use 'Think, Pair Share' strategy.

Individually, take a few minutes to think about whether you know anyone who works in the Construction Industry. Write your thoughts on sticky labels. Discuss your thinking with a partner. Remind children to be clear in their explanations and to use examples to describe their thoughts. Provide sufficient time to review their thoughts before moving into groups of four to share the information. As a class, make a list of all the types of jobs you already

know about in the Construction Industry. Provide each group with two sets of cards (included in Appendices 3 and 4), one set with the construction industry job titles and one set with the job descriptions. Ask each group to try to match the job with the description.

Discuss which jobs each group found easy to match and which were more difficult. Why? Display the cards in the room for the remainder of the project.

For the next stage the children divide into different groups. This resource suggests five groups. However teachers may choose to have more or less depending on the class. Suggested role descriptions for group work are included in Appendix 6.

Divide into groups of five. As a class agree five job titles for each group to research. Individual group members take responsibility for researching one of the job titles chosen. Design a research plan to guide the process (a template is provided in Appendix 5).

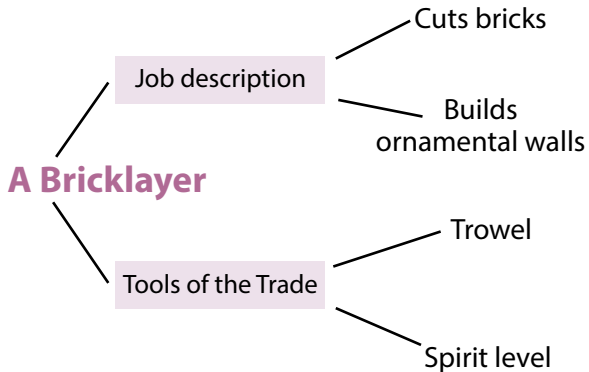
When the children have researched their chosen job, ask them to meet with members of the other groups who had chosen the same job title. Share all the information gathered and record it using a mind-map.

The Process of Mind-Mapping

Write a job role in the centre of a sheet of paper, for example, **Bricklayer**.

From the centre create branches of the main areas researched.

Draw sub-branches in order to illustrate connecting ideas from the main branch. Words and images may be used.



Extension Learning Activities

Place a single chair or 'hot seat' facing the class. Each group nominate a reporter. 'Hot Seat' each reporter and ask him or her to present their key information in just one minute.

Provide the children with an answer, for example, 'The Bricklayer'. In pairs, ask children to generate at least three questions that could match the answer, such as, 'Who uses a trowel and spirit level in their job?', 'In which job would you be expected to cut bricks and build blocks?' and 'Who likes working outdoors and is not afraid of heights?'

Another Brick in the Wall

Continue constructing the vocabulary wall to illustrate any new vocabulary.

Home Learning

Write sample questions for an interview with someone who works in the Construction Industry.

What is a logo? Collect examples of company logos or slogans. Ask the children to collect, if appropriate, business cards from people they know.

Unit 3 Class-ified Ads!

Corporate Identity

The purpose of this Unit is to create a sense of corporate identity. The job roles will not reflect all of the roles within a real construction company. Construction companies often sub-contract in the services of a range of trades.

Resources

- Copy of e-mail from Outer Space
- Sample business cards
- Everyday products displaying advertising
- Internet access

Suggested Learning Intentions

- Be aware of the elements of advertising in order to persuade or engage attention.

Suggested Success Criteria

- Design a company logo and explain reasons for choice.

Suggested Activities

Revisit the e-mail sent from Outer Space. Explain that the class will need to set up a Construction Company. Discuss the job profiles that were researched from Unit Two.

Explain to the class that the first thing they need to consider is a company name and logo. Look at examples from Construction companies in Northern Ireland. Discuss the language used, the layout and the use of images or pictures. Ask small groups to generate a possible name and logo for the company and to explain their choices. Organise a class vote to establish the company name and logo. Display in the classroom.

Look at some examples of business cards and talk about the main features of these cards. Design and create a business card for each member of the class.

Where possible, arrange a visit to the offices of someone in the Construction Industry. Alternatively, invite a representative from the Construction Industry into the class to find out about working in this environment.

Use the Internet to research construction companies in Northern Ireland. Find out about some of their buildings.

Another Brick in the Wall

Continue constructing the vocabulary wall to illustrate any new vocabulary.

Home Learning

Collect advertisements from local newspapers and magazines related to the building trade.

Observe buildings in your local area. Take note of some common and unusual designs of the buildings. Consider some of the materials that have been used in their construction, for example, roofing materials, window frames or type, colour and texture of walls.

Unit 4 Calling Planet Earth

Designing and Carrying out Research

The purpose of this Unit is that through active participation in the designing and carrying out of research, children will be introduced to the concept of Market Research.

Resources

- Internet access
- Clipboards
- Dr Xargle's series of paperback books by Jeanne Willis (Publisher: Andersen Press)

Suggested Learning Intentions

- Understand that there is a difference between needs and wants.
- Know that we all have personal preferences and aspirations.
- Know some of the ways people's actions can improve the environment.
- Be aware of differences that exist between places.

Suggested Success Criteria

- List at least four things people need for space tourism and four things they want.
- Talk about your preferences and how they might be different to others.
- Identify at least three forms of renewable energy.
- Describe at least four distinctive features of planet Mars.

Suggested Activities

Clarify the challenge set from Outer Space (design a space hotel to encourage Space Tourism). Explain that they will need to find out what people from earth need and want, if staying in a hotel in Outer Space. Use whole class discussions to share each other's preferences. The customers (aliens) do not know the needs and wants of humans. We, as the Construction Company, need to find this out. Consider how? Introduce the term 'Market Research'.

Market Research definition

Finding facts and information directly from the potential service users.

Introduce the children to Jeanne Willis' Dr Xargle's series of paperback books. The stories provide an alien's view of life on Earth. Titles include:

Dr Xargle's book of Earthlets
Dr Xargle's book of Earth Relations
Dr Xargle's book of Earth Mobiles

The stories could be explored throughout the duration of this theme.

Divide the class into four groups. Each group might need to create a clear framework for their work and define a time limit from the onset.

Group One

Design and carry out a simple market research questionnaire to determine what humans need and want from a space hotel. The questionnaire should consist of no more than 4 – 6 questions to keep the data collection process manageable.

Group Two

Research famous hotels from around the world. Create a list of top class buildings in order to generate ideas for a space hotel.

Group Three

Research Mars to find out any information that might be of importance, for example, less gravity or the proximity to the sun (solar power potential). Think about how this might impact on the design.

Group Four

Research three forms of renewable energy sources and determine which ones will be used in your space hotel. Explain those that cannot be used and the reasons why, for example, hydro-electric power is not yet an option as there is no known liquid water sources on the surface of Mars.

Invite each group to share their work with the rest of the class.

Another Brick in the Wall

Continue constructing the vocabulary wall to illustrate any new vocabulary.

Home Learning

Design an advertisement that will encourage people to travel to space.

Unit 5 Earth to Mars

Analysing Feedback

The purpose of this Unit is to help children see how to analyse the feedback from their research so that they can use it to inform their planning in the next stage.

Resources

- Large sheets of paper
- Coloured markers

Suggested Learning Intentions

- Know that we all have personal preferences and aspirations.
- Recognise that we are interdependent with others for needs and wants.

Suggested Success Criteria

- Summarise, in ten points, research on space, famous hotels and arguments for and against sustainable energy sources.

Suggested Activities

Is it a need or a want?

Label two sides of the classroom NEED and WANT.

Read out a range of statements from the research gathered. Ask children to consider the statement and think about whether it is a NEED or a WANT. Children then move to the wall that describes their opinion. Encourage them to explain their choice. Children should have the opportunity to switch places if their opinion changes.

All statements that were decided as NEEDS must be considered in the design process.

Ideas Funnel

The class should make a list of all the WANTS and prioritise them. Only the top five will be included in their design.

Allow children to create a human graph. This is done by asking them to form lines which represents the information collated by the market research group.

In small groups, use large sheets of paper to present the graph pictorially.

The Memory Game

Provide each group with a large sheet of paper and ask them to summarise their research in eight to ten points, containing factual information about their particular research topic. Different colours and images may be used to represent the information.

Each group takes around one minute to view one other group's summary before being asked to recreate the other group's sheet including images, words underlined and different colours.

Consider 'how accurate are the maps from memory?' Discuss the information on the original maps and display in the room for the remainder of the topic.

As a whole class, discuss and analyse the research and new learning. Consider any implications this might have for their project. Important points can be recorded and written on the 'W' or 'L' section of their KWL grid (Appendix 2).

Another Brick in the Wall

Continue constructing the vocabulary wall to illustrate any new vocabulary.

Home Learning

Encourage children to choose any aspect of space that is of personal interest and research. Children will need to have an awareness of the process involved in researching a topic. This 'home learning' might need to take place over a number of days or weeks.

Unit 6 Blast Off!

The Design Process

The purpose of this Unit is to establish the design process. The children will be able to apply the skills and knowledge they have gained to create an imaginative and relevant design for the Space Hotel.

Resources

- Flipchart paper
- Coloured markers
- Sticky labels

Suggested Learning Intentions

- Recognise how people are interdependent in a team.
- Understand that a plan guides the research process.
- Be aware of own strengths and qualities.
- Understand how inventions and discoveries have made an impact on our world.

Suggested Success Criteria

- Explain why three jobs are of importance at the planning stage of a construction project.
- Devise a 2D plan for a hotel.
- Talk about individual roles within their group.
- Explain and justify to the class the main features of their plan.

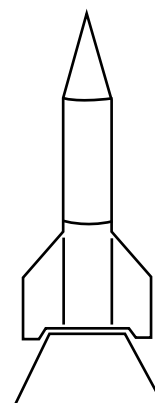
Suggested Activities

Explain to the children that they are going to begin the planning process for their space hotel.

Revisit the range of jobs in the Construction Industry. Consider the following roles that are essential at any planning stage of construction:

- Architect;
- Quantity surveyor;
- Building surveyor.

Provide the groups with large sheets of paper and ask them to draw an outline of a rocket similar to the image opposite.



Provide the following structured questions based around the issue of designing and planning the construction of the hotel:

- **Who needs to be in the rocket?** On the main part of the rocket write down all of the children involved in the planning process, i.e. all members of the group, to illustrate that everyone has a role to play.
- **What needs to be in place for the plan to be successful?** On the launch pad itself children note all the elements that they think are necessary in order for the project (planning) to be successful, for example, resources needed, good teamwork, plans, research findings.
- **What is holding it back?** Children note around the outside of the rocket the issues which may hinder a successful start to the project, such as, have we got all the resources needed, do we all know our responsibilities?

Once the groups have completed their rockets they can compare and contrast each group's to further enhance planning.

Examine the lists of needs and wants from Unit Four and the analysis of research from Unit Five. It would also be worthwhile, at this stage, to revisit the KWL grid and e-mail from Outer Space. Ask children to use this information to construct a list of all the important features that are going to be in their hotel.

Discuss what the elements of a successful plan might be.

Each group can begin to draw a plan for their hotel. Children should be encouraged to add explanations to their plans describing materials that will be used. Depending on the experience of the children scale drawings may be introduced. The children can create a bird's eye view and a profile of how the building might look.

On completion of the plan encourage the children to assess their plans and the process of planning using the Two Stars and a Wish methodology (see below) to determine which aspects are good and any aspects that could be improved.

Extension Activity

Use the Internet to find plans of famous buildings or buildings in their own local area. Are there any features that are common to all of the plans, such as, fire escapes?

For useful websites see the back of this resource

'Two Stars and a Wish'

- Groups carry a set of yellow post-it slips. For each piece of work children write down two things that they like and express a wish that they think would enhance the work in question. The notes should only refer to the description of a successful plan that was generated by the class.
- Groups rotate round other groups' work and carry out the same process.
- Children then return to their own work to read through and discuss what others have indicated on their post-it slips.
- They then prioritise two stars (good points) and one wish (point for improvement) for their work, indicating in a short written evaluation how they intend to enhance their work next time.

Groups may choose to make modifications to their plans at this stage after which each group should present their plan to the rest of the class.

Extension Learning Activity

Consider why rockets travel to space rather than aeroplanes.

An aeroplane sucks air from the atmosphere into the front of the engine. The air is burned with the fuel inside the engine. A rocket carries both the fuel and the oxygen so it even works beyond the atmosphere!

Challenge:

Blow up a long balloon and keep the air in it with a temporary fix, for example, a clothes peg. Pull a piece of string through a straw and tie the string to two stationary posts, for example, chairs. Attach the balloon to the side of the straw with sticky tape. Place the balloon at the starting point and remove the clothes peg to launch the rocket.

Consider the following questions:

- How long does it take to travel from one end of the string to the other?
- How can I make my rocket travel faster?
- What would happen if I filled the balloon with water?
- Are there other ways of making a rocket?
- Which rockets are the best? Why?

Encourage the children to consider some other questions to ask.

Another Brick in the Wall

Continue constructing the vocabulary wall to illustrate any new vocabulary.

Home Learning

Ask children to choose one of the following activities.

- Draw a plan or floor lay out for a room or level of your own home.
- Draw a bird's eye view of your house.
- Identify all the main routes out of your home.
- Discuss and design, with your parents an emergency escape plan in the event of a fire or other emergency.

Collect found materials to use in the model making process.

Unit 7 Martian Models

3D Model Making of the Design

The purpose of this Unit is to allow the children to select materials best suited for the task of producing a 3D model of their design which they then create. They are also encouraged to use examples of other buildings to guide them.

Resources

- Individual group's 2D Plans
- Construction materials, such as, art straws, newspaper, tubing, balsa wood or card
- Paint / markers
- Photographs depicting the different stages in the physical construction of a building (included in the pack)

Suggested Learning Intentions

- Recognise how people are interdependent.
- Know that properties of materials are related to their uses.
- Know how to use some 3D modelling materials.

Suggested Success Criteria

- Successfully sequence a series of pictures in a timeline to describe the different stages in the construction process.
- Match work being carried out in the photographs to trades within the construction industry.
- Choose construction materials related to 'fitness for purpose'.
- Use 3D modelling techniques to make a model hotel of a plan.

Suggested Activities

Provide children with a set of photographs depicting the different stages in the construction of a building. In groups, ask the children to sequence them in stages. They can also identify which trades are involved at each stage. Encourage each group to share their sequences and compare and contrast with other groups in the class. To conclude this activity, it might be fun for the children, in their groups, to play a game of memory where each child can try to list the correct sequence or identify which photograph has been removed while they have been looking away.

Encourage children to think about the materials that they are going to use to construct the different features of their model, for example, provide them with the word 'roof' and ask them to write down two or three materials that they could use to make the roof. Ask them to give reasons for their choices. Encourage the children to think about which materials would be used in a real building and ask them to give reasons as to why. Children can complete the planning grid as they go along (sample provided in Appendix 7).

Building the Models

Children should be given time and encouraged to review their plans, examine their planning grid, and consider the building sequence. When starting their model they should be reminded that it should closely reflect the ideas in their plans. Children should also be encouraged to think about how big their model is going to be, as this will have implications for other features, such as, trees and pools.

Children may decide to form smaller teams to work on different parts of the build just as different teams would be employed to build different features in real life.

On completion of the model, children can use the Two Stars and a Wish methodology of peer assessment (see page 23).

Mini solar modules can be purchased as part of primary science kits to allow children the opportunity to experiment with renewable energy sources, for example, they might choose to put a light inside their 3D model.

Another Brick in the Wall

Continue constructing the vocabulary wall to illustrate any new vocabulary.

Unit 8 Hotel Hype!

Preparing Proposal Presentation

The purpose of this Unit is for children to explore how they will present their work and their models to others in order to promote their designs.

Resources

- E-mail from Outer Space
- Internet
- Advertisements for new builds

Suggested Learning Intentions

- Understand and appreciate that people respond in different ways to a range of stimuli.
- Be aware of own strengths and qualities.

Suggested Success Criteria

- Successfully identify the important components of a good presentation and summarise them in five points.
- Describe the process/ stages that their group will undertake in the planning and completion of their presentation.
- Summarise in five points their decision for using a particular method of presentation.

Suggested Activities

Revisit the e-mail sent from Outer Space. Explain that the class will need to be sure that their model fulfils all the requirements.

Use the Internet and brochures from building companies or estate agents to examine if there are common features in how information about new building projects are presented.

In groups use sticky labels to write down their ideas individually, regarding their presentation. The children can then come together to collate ideas. Place all ideas on a flipchart.

Encourage groups to use the IDEAS FUNNEL strategy (used in Unit Four) to prioritise what is going to be included in their presentation.

Once the groups have decided what the content of their presentation is going to be they will have to decide how they are going to present the information, for example, PowerPoint, role-play or digital video to record the proposal.

To help the children make their decision, they may consider completing a **Consider All Factors** table (CAF). This will help them to weigh up the advantages and disadvantages of each method and come to a decision as to which method is best for them (template included in Appendix 8).

Decision Time

The earlier activities are designed to make groups think about the method and content of their presentation. The children need to decide on how to share out the responsibilities of putting the presentation together. It is suggested that they look again at their **Ideas Funnel** and pick one or two topics each from it. The children should then be given time to discuss their roles and responsibilities.

A straw debate approach may be used here to encourage all members of the group to contribute.

- In a straw debate each member is given three straws.
- Each time they speak they have to hand one in.
- Once the three straws have been handed in the person cannot speak anymore. This encourages children to think carefully about what they would like to say and to ensure that they communicate effectively.

Everyone could be encouraged to use all three straws. The nominated group recorder should write up important points on a board or flip chart during the discussion.

In conclusion, group roles, responsibilities and tasks should be assigned and a time frame for completion of tasks decided.

Another Brick in the Wall

Continue constructing the vocabulary wall to illustrate any new vocabulary.

Unit 9 Selling Space

Presenting the bid

The purpose of this Unit is to give the children the opportunity to bring together all the aspects of the project in the form of a chosen presentation.

Resources

- 3D Models
- Presentation materials
- Certificate of Contract for each child (sample included in the pack)

Suggested Learning Intentions

- Be aware of some of the ways of persuading and sustaining attention.

Suggested Success Criteria

- Present and communicate work, showing an awareness of audience and purpose.

Suggested Activities

Allow each group time to put any finishing touches to their presentations and to facilitate at least one full run through.

Once each group has stated that it is ready, they should take it in turn to deliver their bids. Encourage children to present to parents or members of the local community.

Present each individual with a certificate of contract (sample included in the pack).

As a whole class, discuss their experiences. Revisit the KWL grid to consider whether they learned about all of the things they wanted to. Discuss all the learning that took place throughout the topic and complete the grid. Think about any questions children may have now about any aspects of learning.

Another Brick in the Wall

Complete the construction of the vocabulary wall and review all the vocabulary introduced through the course of the topic.

Home Learning

Write a short report on the project for the school newsletter, local newspaper or school notice board. Alternatively, write own Dr Xargle story to describe hotels on earth from an alien's point of view.

Appendices

Appendix 1

Unit 1 - Sample E-mail

To: All the Children in your class

Subject: MARS CALLING EARTH

Hello Earthlings

We think there is a growing demand for Space Tourism. Lots of earthlings would come to Space on holiday if there were hotels here for them to stay in.

We have heard that construction is everywhere on earth. You have lots of hotels all over the planet. We also know that children in schools come up with the most enterprising ideas.

Citizens of our planet demand an environmentally friendly tourist industry. We hope you can advise.

Challenge:

Put forward a proposal for the building of an environmentally friendly Space Hotel.

Talk later

AL - IENS

Appendix 2

Unit 1 - Sample KWL Grid Template

Know – **W**ant to Know – Learned

K (What we think we already <i>know</i>)	W (What we <i>want</i> to know)	L (What we have <i>learned</i>)

At the end of a topic children can compare and contrast what they have learned with their initial thoughts

Appendix 3

UNIT 2 - CONSTRUCTION INDUSTRY JOB TITLES

JOINER	PAINTER & DECORATOR
STRUCTURAL ENGINEER	PLUMBER
TILER	GENERAL OPERATIVE
ELECTRICIAN	PLANT OPERATIVES

GLAZIER

BRICKLAYER

ROOFER

ARCHITECT

CONSTRUCTION
MANAGER

Appendix 4

UNIT 2 - CONSTRUCTION INDUSTRY JOB DESCRIPTIONS

<p>These people prepare and put into place most of the wooden parts of buildings, from floorboards to stairs and wooden doors. They use specialised woodworking tools and work with many different types of wood.</p>	<p>These people work both on the interior and exterior of buildings. They do not just work with paint they may also need to do wallpapering, special paint effects or sign writing. They will need to do all the preparation work required before they begin.</p>
<p>This person is responsible for deciding the shape of a building and the materials it is made from. They can be responsible for making old or damaged buildings safe again.</p>	<p>These people prepare and put into place pipes that carry hot and cold water for heating and use within a building. They use specialised tools and work with many different types of metal. They may be required to install boilers that heat the water by burning oil, gas or coal. A new area for this job is the installation of renewable energy sources, for example from the sun or the wind.</p>
<p>These people create a waterproof covering mainly in kitchens and bathrooms using various sizes, shapes and designs of tiles. They use special tools to cut and shape tiles and use adhesive to stick them to the wall or floor.</p>	<p>These people need to enjoy doing different things all the time. They are masters of many trades. Some of the areas they are involved in are concreting floors or installing timber in trenches to make them safe. They need to know safety procedures for each job they do. They need to be flexible, enjoy working indoors, outdoors, at great heights and even at great depths!</p>
<p>These people prepare and put into place all of the cables and switches required to carry electricity to the various electrical appliances and sockets throughout the building. They will use specialised tools for cutting and joining the wires and dedicated instruments to test the system is operating correctly and is safe.</p>	<p>These people work with some really big machinery. Earthmoving with excavators and bulldozers, crane driving, using forklifts... some of the machinery can be pretty awesome! They can move hundreds of tonnes of earth in a day or shift some extremely heavy loads. As you'd expect, safety is very important.</p>

<p>This person is responsible for installing the windows and possibly the external doors of a building. Glass can be very heavy so they need to be strong, as well as careful, and be able to work at heights. They will use specialised tools for fitting the window frames and installing the glass. They may be required to work with a range of materials including, glass, plastic, metal and wood.</p>	<p>These people work with many different materials - and they can create different effects. They also use a variety of specialist tools to spread and join mortar and cut bricks or blocks to size. A love of the great outdoors is essential. It can be pretty hard work, so they need to be fit, as well as careful because they can be working at heights.</p>
<p>This person creates a waterproof covering for a building by applying individual slates or tiles to a timber framework. They use drawings and instructions from the Site Manager to decide what work needs to be completed first. They will assess the situation, check the scaffolding and make a start on the job. They need a good head for heights!</p>	<p>Once the initial ideas for a new building or restoration job have been drawn out, it is this person's job to design the building in detail - right down to the last brick. This is done both by hand, and with the help of computers. They need more than just an eye for detail and a flair for design. They need good people skills, and excellent communication skills. This person is responsible for obtaining planning permission. They also have to keep the client and building contractor happy through their choice of building materials, and meet regularly with the construction team and other team members.</p>
<p>This person is responsible for co-ordinating the construction team on site. They liaise between the client and the design team. Their job is to ensure that the construction site runs smoothly and the building is completed on time and to the required standard. With so many different trades to organise, problem solving is a big part of the job.</p>	

Appendix 5

UNIT 2 - SUGGESTED RESEARCH GUIDE TEMPLATE

Job Title:

Area of Interest	Group Member	Findings
Job Description		
Skills and qualifications		
Materials used		
Tools of the trade		
Safety precautions at work		

Appendix 6

UNIT 2 - SUGGESTED ROLE DESCRIPTIONS FOR GROUP WORK

Timekeeper <i>thinks about time</i>	Timekeeper <i>thinks about time</i>
Group leader <i>thinks about the group</i>	Group leader <i>thinks about the group</i>
Recorder <i>thinks about writing</i>	Recorder <i>thinks about writing</i>
Reporter <i>thinks about speaking</i>	Reporter <i>thinks about speaking</i>

Appendix 6

UNIT 2 - SUGGESTED ROLE DESCRIPTIONS FOR GROUP WORK

Resource Manager <i>thinks about resources</i>	Resource Manager <i>thinks about resources</i>
Quality checker <i>thinks about the task</i>	Quality checker <i>thinks about the task</i>

Appendix 7

UNIT 7 - SUGGESTED PLANNING TEMPLATE

Planning Grid					
Model feature	Material Chosen	Reason	Real Building	Material used	Reason
Foundations			Foundations		
Walls (External and Internal)			Walls (External and Internal)		
Floors			Floors		
Roof			Roof		
Windows and doors	Card	Flexible easy to cut and glue	Windows and doors	PVC	Cheap Strong waterproof
Energy sources			Energy sources		
Interior finishing			Interior finishing		
Landscaping			Landscaping		

Appendix 8

Consider All Factors TEMPLATE

Which method of presentation is best for us?	
Option One	Pros
	Cons
	Interesting factors
Option Two	Pros
	Cons
	Interesting factors
Option Three	Pros
	Cons
	Interesting factors
After discussion of all the factors, we think that.....	

USEFUL WEBSITES

www.actionrenewables.co.uk	Renewable energy experts
www.bconstructive.co.uk	Construction skills website. Includes diaries of young people working in the industry and some of the UK's most exciting new construction projects
www.ccea.org.uk	Council for the Curriculum, Examinations and Assessment website. Includes 'From Little Acorns' micro-site aimed at providing guidance and advice for primary teachers in the area of Enterprise Education
www.citbni.org.uk	Construction Industry Training Board website
www.faqkids.com	Answers to some of the questions children frequently ask. Section on Outer Space
www.hseni.gov.uk	Health and Safety Executive for Northern Ireland
www.hope-education.co.uk	Solar module packs
www.planningni.gov.uk	DOE Planning Service website
www.armaghplanet.com	Armagh Planetarium. Educational visits and outreach programmes on Space, including rockets
www.space.com	Lots of interesting facts about space
www.spacefuture.com	Learn about space tourism, energy from space and space travel
www.nasa.gov	NASA Kids' Club

At the time of printing the suggested websites were live.

Certificate of Contract

This is to certify that

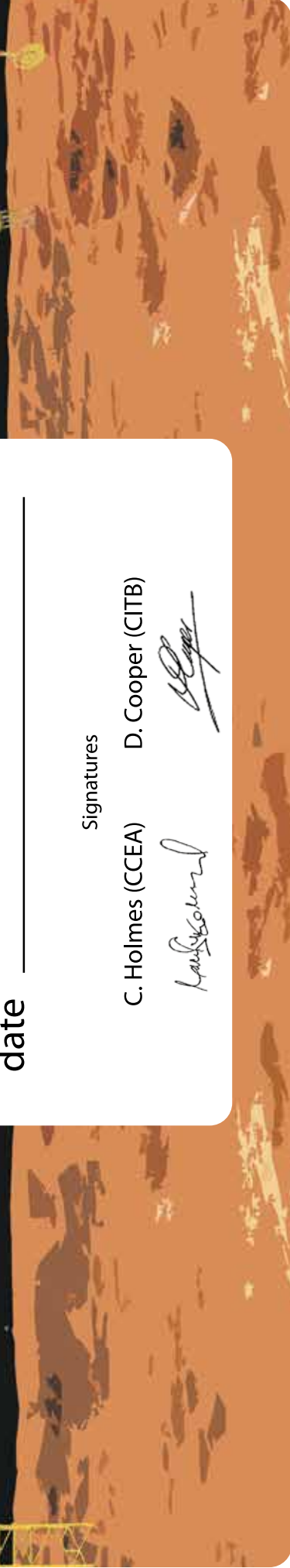
has been successful in bidding for the
Out of This World Contract

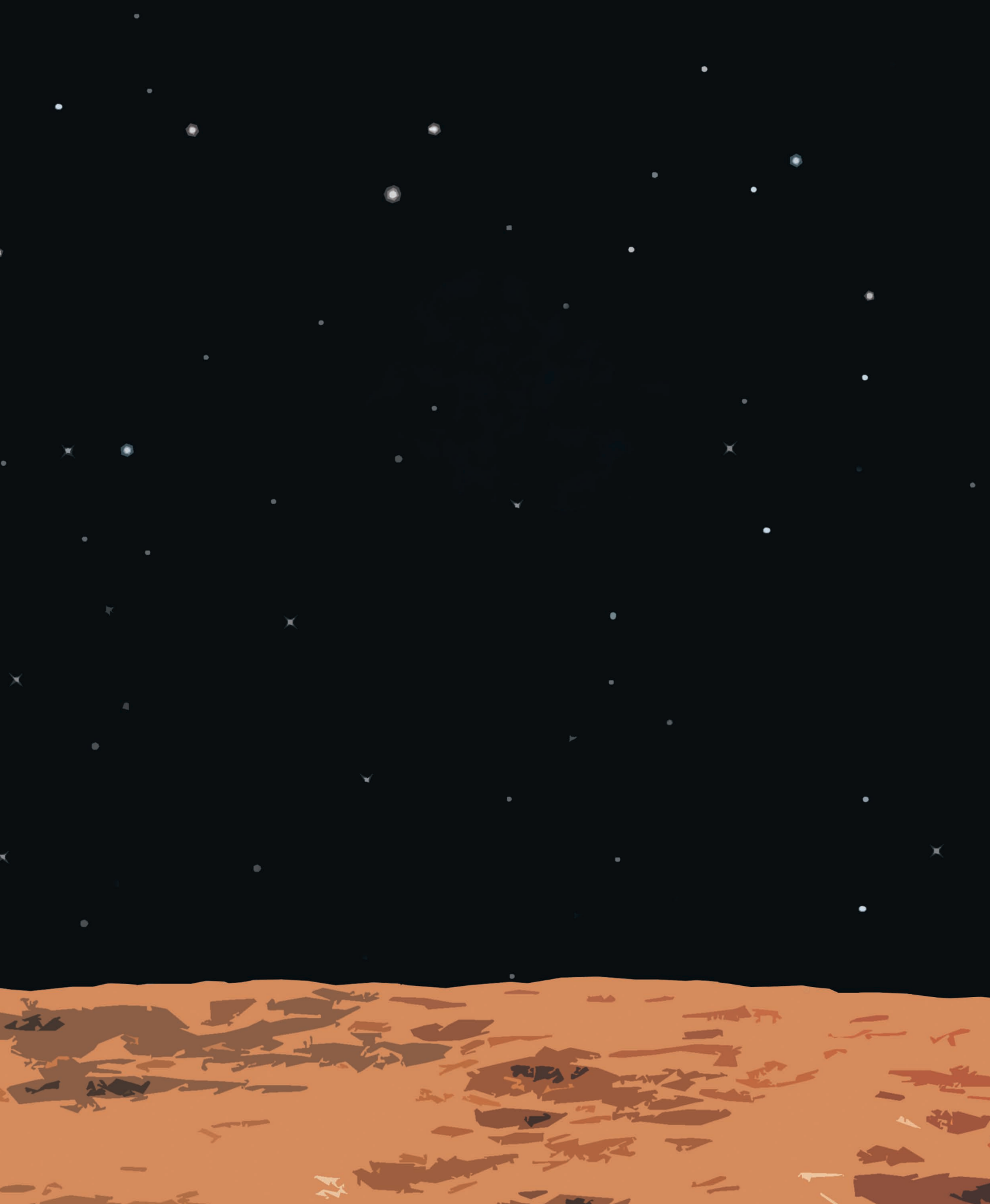
at _____

date _____

Signatures

C. Holmes (CCEA) D. Cooper (CITB)





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