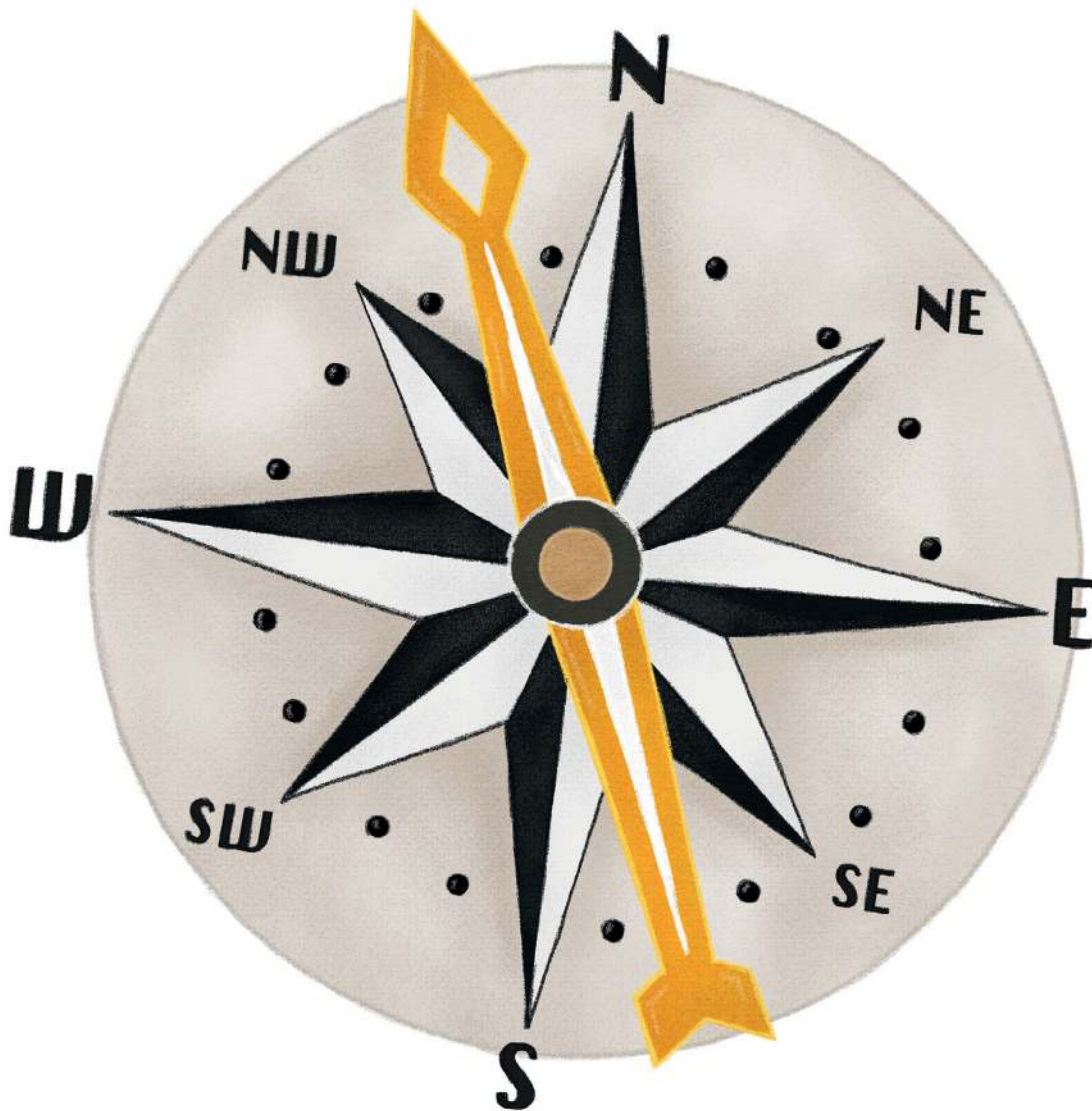
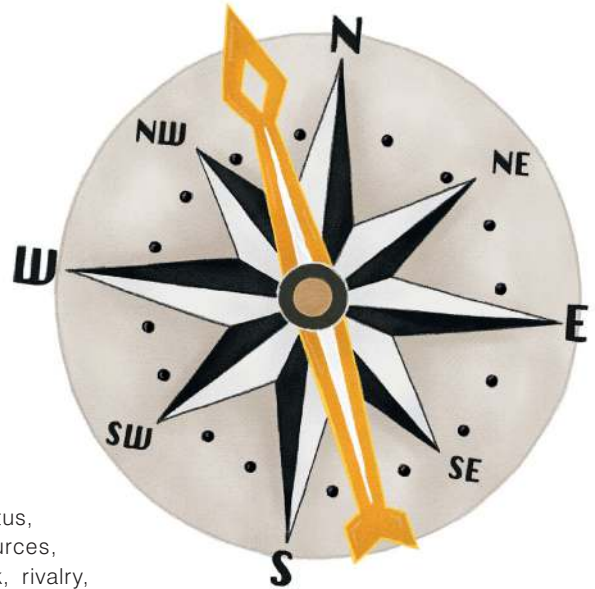


Why explore?

KEY CONCEPT: Exploration



Why explore?



KEY CONCEPT:

Exploration

KEY WORDS:

Explore, exploration, explorer, discovery, journey, ambition, status, challenge, bravery, foolhardiness, acquisition, power, resources, adventure, plunder, progress, protection, prosperity, survival, risk, rivalry, ingenuity, technology, pioneering, opportunity, new frontiers, the unknown, voyage, beyond earth, space, navigation, communication, progress, economics, cost – benefit, astronaut, cosmonaut, seafarer, mountaineer and navigator.

LEARNING INTENTION:

To understand the different ways in which exploration can take place and why it happens.

SUCCESS CRITERIA:

We can

- Describe what exploration is and name a variety of explorers.
- Identify the different ways people explore and appreciate the impact which exploration has upon our lives.
- Explain the reasons why people explore.
- Question whether people should explore.

STRATEGIES USED:

Odd One Out

Opinion Corners

Concept Lines

1. Identify Important Concepts:

Some of the key areas to investigate within and around the concept of 'exploration' are the following:

- A definition of exploring and exploration
- A definition of an explorer
- Types of exploration (wilderness, urban, space, scientific, philosophical)
- The nature of exploration
- Exploring the 'impossible' (going against common belief to uncover new understanding, risk taking or going into uncharted territory)
- Exploring the 'possible' (exploring more deeply things or places we already know about to extend our knowledge and understanding)
- People who undertake exploration
- Risk and reward
- Motivation
- Status and power
- Exploitation and damage
- Financial and human cost
- Resource implications
- Competition
- Progress
- Human instinct
- Survival
- Gender and exploration
- Benefits and impact of exploration

2. Challenge Students' Understanding of the Concept:

Here are some examples of cognitive conflict we expect your students to experience:

Opinion	Conflicting opinion
Space exploration is very expensive, and this money could be used to help those with no money and no homes.	You can't put a price on the knowledge that has been gained through space exploration. Exploring space has provided jobs for many people.
Exploration can be very dangerous and risky.	There are risks in everything we do. We would never go anywhere or do anything if we didn't take risks.
We don't need explorers anymore. The internet tells us everything we need to know about the world.	The world is vast and thanks to explorers we are making new discoveries all the time. We now know that many life-saving medicines exist in the Amazon rainforest.
Brave explorers inspire us and show us what is possible.	My family inspire me and challenge me to be the best I can be.

Questions for challenge

- What is exploration?
- What or where can be explored?
- What kind of exploration have you done?
- Why would someone want to explore?
- Is it possible to explore something I already know; like this classroom?
- Can we only explore places?
- Would you be able to explore without moving?
- Does exploration always have to involve travel of some kind?
- What is the difference between travelling and moving?
- What tools can I use to help me explore, without moving? (e.g. a microscope, a telescope, the internet)
- What is an explorer?
- What explorers can you name?
- If an explorer travels, does it have to be somewhere new? (or) just new to them?
- Should an explorer always find something?
- What is the difference between finding and discovering?
- Is exploring always a risk-taking activity?
- When is it important to take risks?
- Why do explorers want to explore?
- What might be the rewards of exploration?
- What is a reward? What reward did Neil Armstrong, the first man on the moon get? (or) What reward did Roald Amundsen get for being the first man to get to the South Pole?

- Should nations be proud of their explorers?
- How do we know if there anything left to explore?
- If we explore something, do we always find out more about it?
- Is it possible to explore an idea?
- What have we been exploring in the pit today? Have we found or discovered anything?
- Should people explore things even if it is dangerous to do so?
- Humans are continuing to explore space. We often call this the 'space race'. Does exploration always need to be competitive?
- Is it possible for babies to explore?
- How do we know that money spent on exploration is worth-while?

Activity 1: Odd One Out

Activity 1 resource cards, showing a range of explorers can be found at the end of the lesson plan. There are two sets of cards and for each of these cards, you will find that there is a photocopyable 'front' and 'back' for each card. The cards with an orange border are for younger students or those who may need additional support and those with a blue border for older students or those who would benefit from the additional challenge.

This activity works very well with students in small groups of 3 or 4.

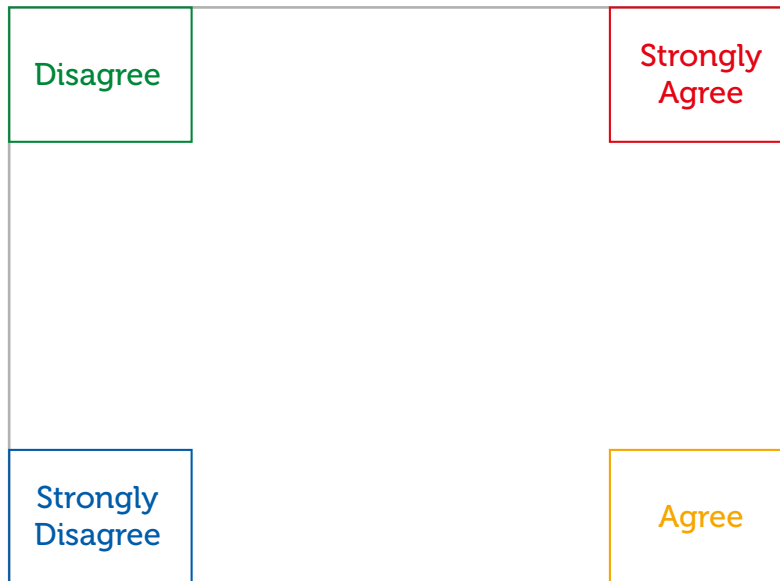


Odd One Out

Give each group of students 3 cards. Ask them to identify which one is the odd one out and why. Encourage them to continue to look for alternative answers and reasons for what might be the odd one out

3. Construct Understanding:

Activity 2: Opinion Corners



Your students should now consider the reasons **why people explore**.

Challenge them to consider whether they agree, disagree, strongly agree or strongly disagree with a range of statements that relate to the motivation behind exploring.

Use **Activity 2 resource cards** for this activity. These can be found at the end of the lesson plan. Orange cards are for younger students or those needing additional support. Blue cards are for older children or those requiring more challenge.

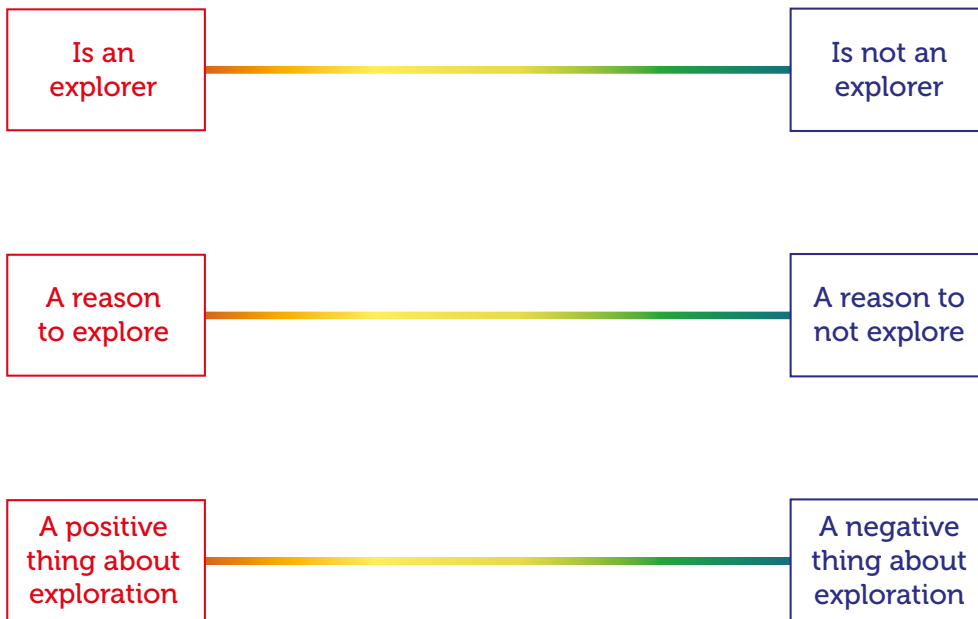
It is useful to support your students when they are sorting through the information in front of them. This can help them to interpret and handle the information more easily, and reconstruct their thinking in order to reach an understanding.

Activity 3: Concept Lines

A Concept Line represents the characteristics of a concept rather than agreeing or disagreeing with a concept. Your students are now challenged to consider what constitutes an explorer, as well as the positive and negative aspects of exploring.

Use **Activity 3 resource cards** for this activity. Select the statements you would like your students to consider. These are labelled so you know which statements to use with which Concept line.

Ask your students to consider where the statements would fit on the following Concept Lines, and encourage them to share their thoughts and ideas to justify the position they have chosen.



Adaptation

For younger students, reduce the number of cards or resources they are categorising at any one time.

Extension

Your students could create their own cards for the Odd One Out activity and add new statements for the Concept Line activity.

You could challenge your students to identify nine characteristics that they believe explorers possess. They could then rank the most important using a Diamond 9.

4. Consider The Learning Journey:

At the end of the activity it is usual to encourage the students to review their learning journey and the thinking process they have engaged in throughout the session.

This can include reflection on the thinking that has taken place to this point and a summary and conclusion of the new understanding reached.

They can do this by returning to and re-examining some key questions.

- Why do people explore?
- What does exploration involve?
- Who explores?
- How has exploration helped us?
- Is exploration always risky?
- Is it always wrong to take risks?
- To what extent is exploration necessary?
- What do you think should never be explored?
- What have you explored during this lesson?
- Have you changed your views on anything during this lesson?
- What skills have you used during today's lesson?
- Which of these skills do explorers use?
- Could you use those skills in other areas of your life?

Ideas for transfer

Your students could explore their school environment. They could collect data of what new information they have collected and communicate it through pictures and graphs.

Your students could research an explorer of their choice and produce a biography about them highlighting the contribution their explorer has made to the world.

Your students could compile and display a fact file on their chosen explorer and get their fellow students to vote for their favourite explorer.

Your students could write a newspaper article which is set in the future and report on an exploration that they believe will take place in the future.

ACTIVITY:
Why explore?
1-1 (front of card)



A search and rescue dog

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ACTIVITY:
Why explore?
1-2 (front of card)



A doctor

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ACTIVITY:
Why explore
1-3 (front of card)



A diver

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ACTIVITY:
Why explore?
1-4 (front of card)



An astronaut

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ACTIVITY:
Why explore?
1-5 (front of card)



A scientist

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ACTIVITY:
Why explore?
1-6 (front of card)



Alice in Wonderland

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ACTIVITY:
Why explore?
1-7 (front of card)

Thinking

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ACTIVITY:
Why explore?
1-8 (front of card)

Dreaming

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ACTIVITY:
Why explore
1-9 (front of card)

Remembering

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ACTIVITY:
Why explore?
1-10 (front of card)

Neil Armstrong

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ACTIVITY:
Why explore?
1-11 (front of card)

Louis Pasteur

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ACTIVITY:
Why explore
1-12 (front of card)

Christopher Columbus

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ACTIVITY:
Why explore?
1-13 (front of card)

An Adventure Scout

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ACTIVITY:
Why explore?
1-14 (front of card)

Amelia Earhart

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ACTIVITY:
Why explore
1-15 (front of card)

Steve Jobs

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ACTIVITY:
Why explore?
1-16 (front of card)

J.K. Rowling

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ACTIVITY:
Why explore?
1-17 (front of card)

Pablo Picasso

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ACTIVITY:
Why explore
1-18 (front of card)

Valentia Tereshkova

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ACTIVITY:
Why explore?
1-19 (front of card)

Debating

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ACTIVITY:
Why explore?
1-20 (front of card)

Arguing

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ACTIVITY:
Why explore
1-21 (front of card)

Questioning

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ACTIVITY:
Why explore?
1-1 (back of card)

A search and rescue dog

- Dogs are trained from 8 weeks old.
- Obedience is a key part of their training.
- Rescue dogs detect human scent and help to find missing people.
- They have a great sense of smell and can track a scent for miles.
- They help fire fighters search dangerous sites and explore mountains and areas of natural disasters.

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ACTIVITY:
Why explore?
1-2 (back of card)

A doctor

- You become a doctor at 29.
- Doctors gather evidence and data.
- Doctors explore the human body and mind.
- Doctors explore new medicines and treatments to help people.
- Doctors work very long hours searching for the answers to medical problems and dilemmas.

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ACTIVITY:
Why explore
1-3 (back of card)

A diver

- You can have diving lessons from 10 years of age.
- Divers solve the mysteries of the ocean.
- The ocean can be hostile to humans, so divers are brave.
- Divers explore underwater creatures, caves and shipwrecks.
- Some divers rescue people from the ocean.

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ACTIVITY:
Why explore?
1-4 (back of card)

An astronaut

- The term “astronaut” derives from the Greek words meaning **space sailor**.
- Most astronauts study things like engineering, mathematics, science or computer technology.
- Astronauts have to undertake extensive training and testing before they can take part in a spaceflight.
- Some astronauts work with pilots to conduct experiments, launch satellites, and look after spacecraft and equipment.
- Astronauts risk their lives in order to explore space.

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ACTIVITY:
Why explore?
1-5 (back of card)

A scientist

- A scientist solves problems and makes observations about the world.
- A scientist uses equipment and tools to measure and study the world.
- Scientists persevere until they find answers. They never give up.
- They help us understand how things work and why things happen.
- They find solutions and cures by exploring materials and the natural world.

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ACTIVITY:
Why explore?
1-6 (back of card)

Alice in Wonderland

- Alice has an amazing dream about changing size and meeting lots of different creatures.
- Alice is an intelligent, curious and trusting character who is ready to accept the impossible.
- Alice followed the white rabbit down the rabbit hole without thinking about how she was going to get out again.
- Alice becomes a guest at a “mad” tea party along with the March Hare, the Hatter and a very tired Dormouse.
- The character of Alice is based on a real girl, called Alice Liddell, who was one of the author’s child-hood friends.

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ACTIVITY:
Why explore?
1-7 (back of card)

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ACTIVITY:
Why explore?
1-8 (back of card)

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ACTIVITY:
Why explore
1-9 (back of card)

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ACTIVITY:
Why explore?
1-10 (back of card)

Neil Armstrong

- He was a boy scout.
- American Astronaut and engineer.
- First person to walk on the moon.
- He received the Presidential medal of freedom.
- He made the impossible, possible.

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ACTIVITY:
Why explore?
1-11 (back of card)

Louis Pasteur

- He is one of the most important scientists in history.
- He earned degrees in mathematics, physics and chemistry.
- He proved that germs were the cause of illness.
- In 1862, he invented the pasteurization process.
- He discovered methods of protecting people against 2 deadly diseases: anthrax and rabies.

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ACTIVITY:
Why explore
1-12 (back of card)

Christopher Columbus

- He was an Italian navigator and explorer.
- He completed 4 voyages across the Atlantic.
- He was the first European to discover America in 1492.
- He listened to the stories of sailors.
- He brought horses to America.

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ACTIVITY:
Why explore?
1-13 (back of card)

An Adventure Scout

- They work in a team to learn new skills and face new challenges.
- They show courage in the face of difficulties.
- They study survival and put this into practice in the wilderness.
- They gain badges for participating in new adventures.

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ACTIVITY:
Why explore?
1-14 (back of card)

Amelia Earhart

- She was the first woman to fly solo across the Atlantic.
- In 1917, she trained as a nurse and began volunteer work to help injured soldiers.
- Between 1939 and 1935, she set seven women's speed and distance aviation records.
- She was a supporter of equal rights for women and saw her role to inspire women to achieve the same things as men.
- She disappeared in 1937 during an attempt to fly around the world.

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ACTIVITY:
Why explore
1-15 (back of card)

Steve Jobs

- Co-founder of Apple and Pixar pictures.
- He loved to explore how electronics worked.
- He dropped out of college and travelled to India to discover who he was and what he wanted to do with his life.
- At 21 he designed his first computer in his parent's garage.
- He loved to explore new ideas and introduced the iPod and iPhone to the world.

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ACTIVITY:
Why explore?
1-16 (back of card)

J.K. Rowling

- Joanne Rowling is the author of Harry Potter.
- She explores her vivid imagination to create characters for her books.
- She imagines and creates new worlds.
- She explores the use of words and presents them on paper.
- She enables people to escape the realities of their daily lives.

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ACTIVITY:
Why explore?
1-17 (back of card)

Pablo Picasso

- Picasso became one of the greatest and most influential artists of the 20th century.
- When Pablo was age 7, his father (who was also a painter) gave him artistic training in figure drawing and oil painting.
- Picasso was a painter, sculptor, printmaker and poet.
- He produced around 50,000 artworks in his lifetime.
- He co-founded the Cubist movement and co-invented several new styles of art, including constructed sculpture, collage, and the plastic arts.

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ACTIVITY:
Why explore
1-18 (back of card)

Valentia Tereshkova

- Valentia is a retired Russian engineer and cosmonaut.
- She was the first woman to have flown in Space.
- She selected from over 400 applicants.
- She was the pilot of Vostok 6 and made 48 orbits of Earth during her 3-day mission.

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ACTIVITY:
Why explore?
1-19 (back of card)

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ACTIVITY:
Why explore?
1-20 (back of card)

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ACTIVITY:
Why explore
1-21 (back of card)

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There are always risks for people who explore.

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Explorers have to move or travel.

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We can only explore places.

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Only adults can explore.

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We can only explore big things.

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We can explore cyberspace.

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All explorers are brave.

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Some explorers are brave.

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No one explores unless there is some reward.

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Rewards
are always
things that are
valuable.

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Discovering
something
is different
to finding
something.

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We can only
find out new
things if we
explore.

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We wouldn't
have lots of
different foods
if people hadn't
explored.

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Explorers are
curious.

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Explorers are
determined.

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We can't be
real explorers.

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Exploration
never does
any harm.

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Some explorers
probably did what
they did because
they just wanted
to be famous.

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All explorers are
competitive.

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Fame and status
for the explorer
or the explorer's
country is a
form of reward.

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Exploration was
more exciting in
the past.

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There is nothing
left to explore on
our planet.

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Exploring
things that are
dangerous is
unnecessary.

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Exploring things
that are dangerous
should only be
done by people
who understand
the risks.

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Exploration is
part of human
nature.

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Exploration can
lead to trouble.



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Famous
explorers are
all men.



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Explorers have
to be men.



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ACTIVITY:
Why explore?
Concept Line Statements:
Is an explorer / Is not an explorer.
3-1

ACTIVITY:
Why explore?
Concept Line Statements:
Is an explorer / Is not an explorer.
3-2

ACTIVITY:
Why explore?
Concept Line Statements:
Is an explorer / Is not an explorer.
3-3

A scientist using
a microscope
to see how drug
resistant bacteria
behave.

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An astronaut
mending the
International
Space Station.

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The first person
in space.

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ACTIVITY:
Why explore?
Concept Line Statements:
Is an explorer / Is not an explorer.
3-4

ACTIVITY:
Why explore?
Concept Line Statements:
Is an explorer / Is not an explorer.
3-5

ACTIVITY:
Why explore?
Concept Line Statements:
Is an explorer / Is not an explorer.
3-6

Christopher
Columbus

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A baby in a cot
reaching up to
touch a mobile.

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Someone
looking for their
lost car keys

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ACTIVITY:
Why explore?
Concept Line Statements:
A reason to explore / Not a reason to explore
3-7

ACTIVITY:
Why explore?
Concept Line Statements:
A reason to explore / Not a reason to explore
3-8

ACTIVITY:
Why explore?
Concept Line Statements:
A reason to explore / Not a reason to explore
3-9

Wondering
what's on the
other side of
an enormous
ocean.

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Wanting
adventure.

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Wanting to be
famous.

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ACTIVITY:

Why explore?

Concept Line Statements:

A reason to explore / Not a reason to explore

3-10

Wanting to stay absolutely safe.

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ACTIVITY:

Why explore?

Concept Line Statements:

A reason to explore / Not a reason to explore

3-11

Not wanting a challenge.

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ACTIVITY:

Why explore?

Concept Line Statements:

A reason to explore / Not a reason to explore

3-12

Wanting to expand human understanding and knowledge.

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ACTIVITY:

Why explore?

Concept Line Statements:

A positive thing about exploration / A negative thing about exploration

3-13

We find out about new places.

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ACTIVITY:

Why explore?

Concept Line Statements:

A positive thing about exploration / A negative thing about exploration

3-14

We change places when we explore them.

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ACTIVITY:

Why explore?

Concept Line Statements:

A positive thing about exploration / A negative thing about exploration

3-15

We can understand things when we explore them.

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ACTIVITY:

Why explore?

Concept Line Statements:

A positive thing about exploration / A negative thing about exploration

3-16

We push the frontiers of human knowledge and understanding when we explore.

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ACTIVITY:

Why explore?

Concept Line Statements:

A positive thing about exploration / A negative thing about exploration

3-17

We find out about things that do us harm when we explore.

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ACTIVITY:

Why explore?

Concept Line Statements:

A positive thing about exploration / A negative thing about exploration

3-18

Sometimes exploring can mean taking a risk.

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