

ACTIVITY 6.2 VISUAL DICTIONARY OF DEEP SPACE

From Chapter Six of the Deep Space Diary discoverydiaries.org/activities/visual-dictionary-of-deep-space/

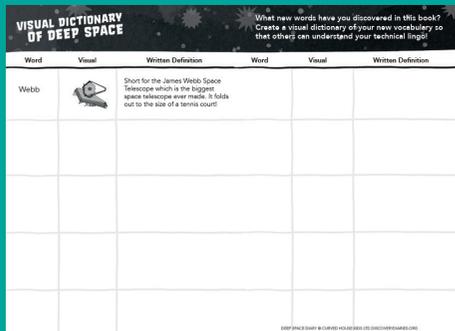
LEARNING LEVEL

KS2, P5-7, Y4-6

CURRICULUM LINKS & DIFFERENTIATION IDEAS

View detailed curriculum links for England, Scotland, Northern Ireland and Wales in the Teacher Toolkit, plus differentiation ideas for your region and year level.

discoverydiaries.org/resources/teacher-toolkit/



Learning Objective

To learn and practise spelling scientific vocabulary.

Resources Required

- Smartphone/device or computer to access Zap code (optional)
- Dictionaries – online and print
- Drawing materials

Background to this Activity

As students complete each of the four word searches in the Deep Space Diary, ask them to add the words they find to their dictionary. They can then research the definitions of those words and write them in the corresponding space and draw a picture.

Running the Activity

Start by building a word bank using the words found in the word searches. Students can contribute other scientific words they might have come across in completing other activities in their diary, which could be noted on cardboard or a whiteboard. Students can then use dictionaries to find the definitions of words, building their scientific vocabularies.

Once students have located the definitions of words, discuss as a class why we sometimes represent the meaning of words with symbols or images. Can students contribute examples of visual representations of words? Are there any examples in the classroom (e.g. an exit sign, a recycling guide, a sign indicating the location of a First Aid Kit)? What about other areas of the school (e.g. the signs on bathroom doors)? Note these down on a whiteboard to help support learning.

In small groups or pairs, students can then discuss how the meanings of the word search solutions might be represented visually. More capable students can use

peer assessment to test how well a word has been represented visually.

Solutions from Word Searches

Word Search Chapter 2: Light, Prism, Reflect, Spectrum, Infrared, Optical, Gradient, Absorb

Word Search Chapter 3: Discovery, Construct, Experiment, Structure, Mirror, Method, Engineer, Payload

Word Search Chapter 4: Program, Commands, Deploy, Encryption, Calibrate, Instrument, Decode, Sequence

Word Search Chapter 5: Astronomer, Galaxy, Protostar, Data, Infographic, Celestial, Planet, Atmospheric

For additional words and definitions, see the Deep Space Glossary: discoverydiaries.org/toolkit/deep-space-glossary/

Questions for the Class

- Why is it important to have definitions for words?
- What other scientific words do you know?
- What are some examples of when we represent words with symbols or images?
- Why do we sometimes represent words with images?

Additional Challenges / Extension Activities

Ask students to create acrostic poems, using the words in their Visual Dictionary.

Ask students to rearrange the letters of words from their dictionary, then test a partner to see if they can unjumble the words.

Ideas for Differentiation

Support:

- Work as a class or in groups to find definitions, assigning words to students.

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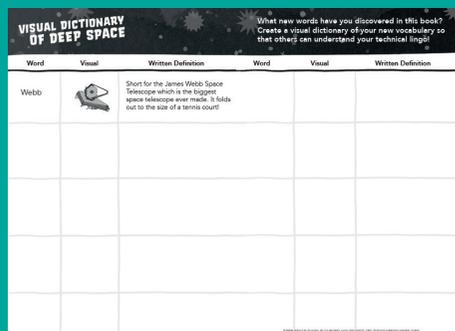
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- Work as a class or in groups to generate ideas around images that could be used to visually represent words.
- Students who are not confident drawers could cut pictures from magazines or source them from the internet to use as their visual representation.

Challenge:

- Ask students to use printed dictionaries, rather than searching online for definitions.
- In small groups, more capable students can review images, analysing their effectiveness and drawing conclusions as to why or why not.

Useful Links

Deep Space Glossary: discoverydiaries.org/toolkit/deep-space-glossary/

ZAP! Students can independently access multimedia resources using the Zappar mobile/tablet app. See Zappar instructions at the link below and note that the mobile/tablet will need to be on a WIFI connection: discoverydiaries.org/toolkit/discovery-diaries-zappar-instructions/

If you don't have access to the internet in the classroom, all Zap code content is available to download on the activity's web page (see link to the left) as a PowerPoint presentation or as bundles of images.



Find more great space-themed STEM resources at <https://www.stem.org.uk/esero>