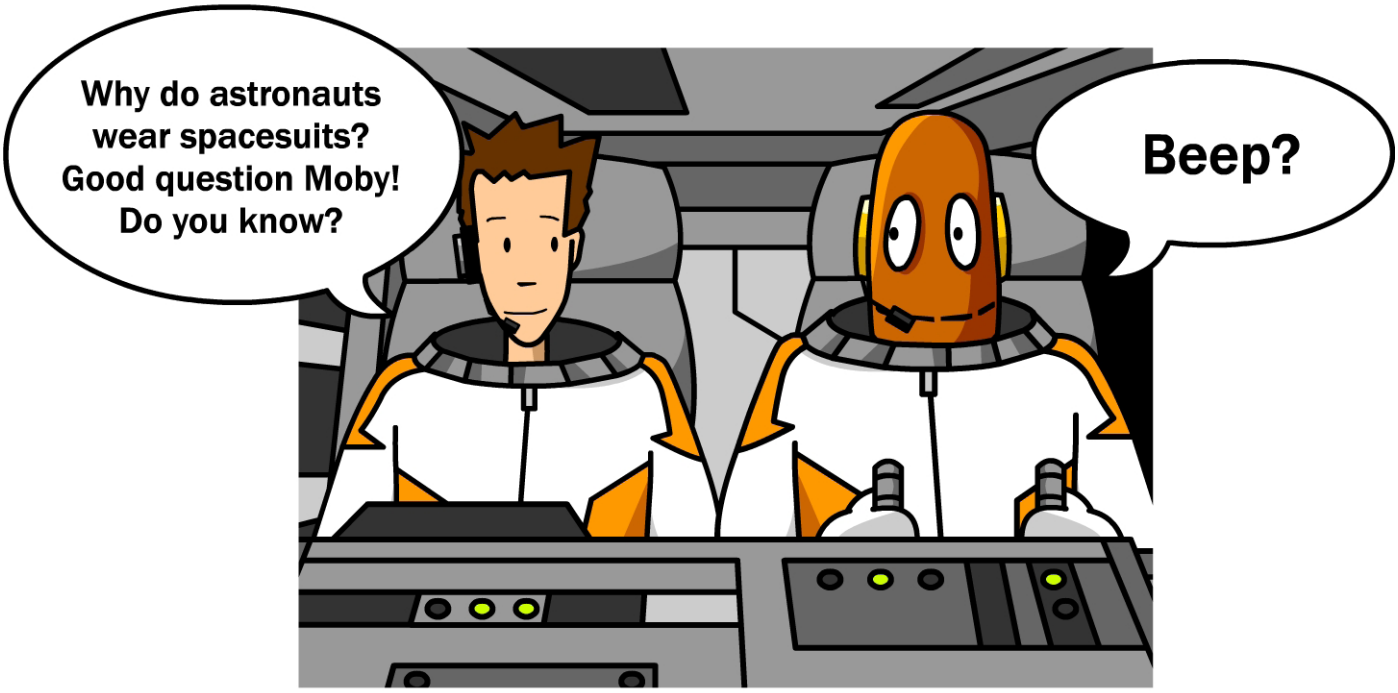
IDEAS & ACTIVITIES

TEACHER'S EDITION: A TEACAKE IN SPACE!



School-based tasks

Think about different films where people go into space. We have given you two examples to start but try to think of your own examples too.

1. *Star Wars: The Empire Strikes Back* –
Hans Solo and his crew hide their spaceship in a space cave and wander around outside wearing little oxygen masks.

2. *2001: A Space Odyssey* –
The character, Dave, enters a vacuum in the spaceship without his spacesuit helmet.

3. _____

4. _____

5. _____

6. _____

Teacher's note: Do a quick search on google or youtube for film clips. If your school does not have access to youtube, space travel scenes from any tv series, book or comic can be used as alternatives.

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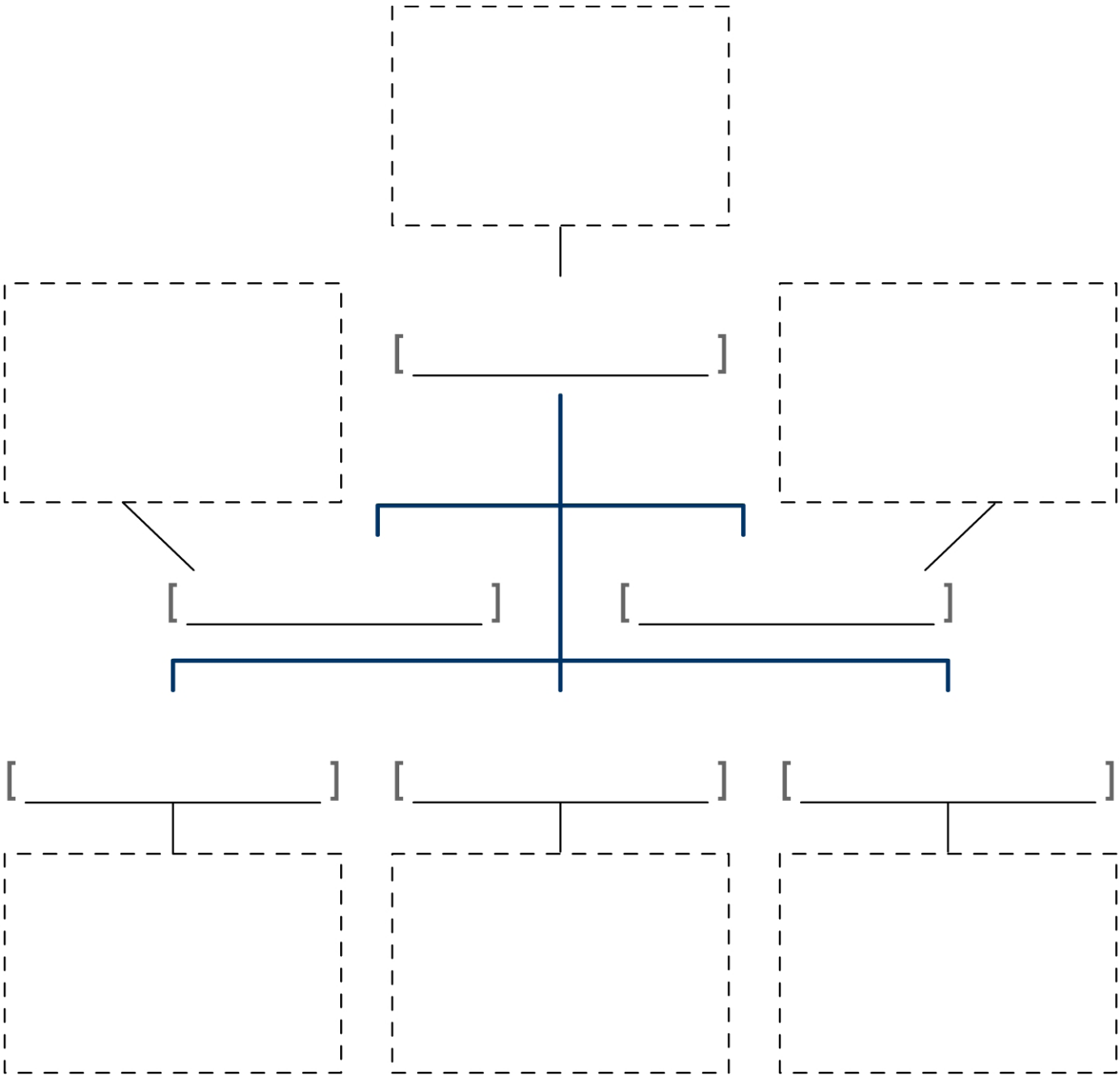
The Pyramid

How realistic are these films and the examples you thought about? Add the films in the pyramid below with the most realistic at the top and the least realistic at the bottom.

Explain your choices in the callout boxes.



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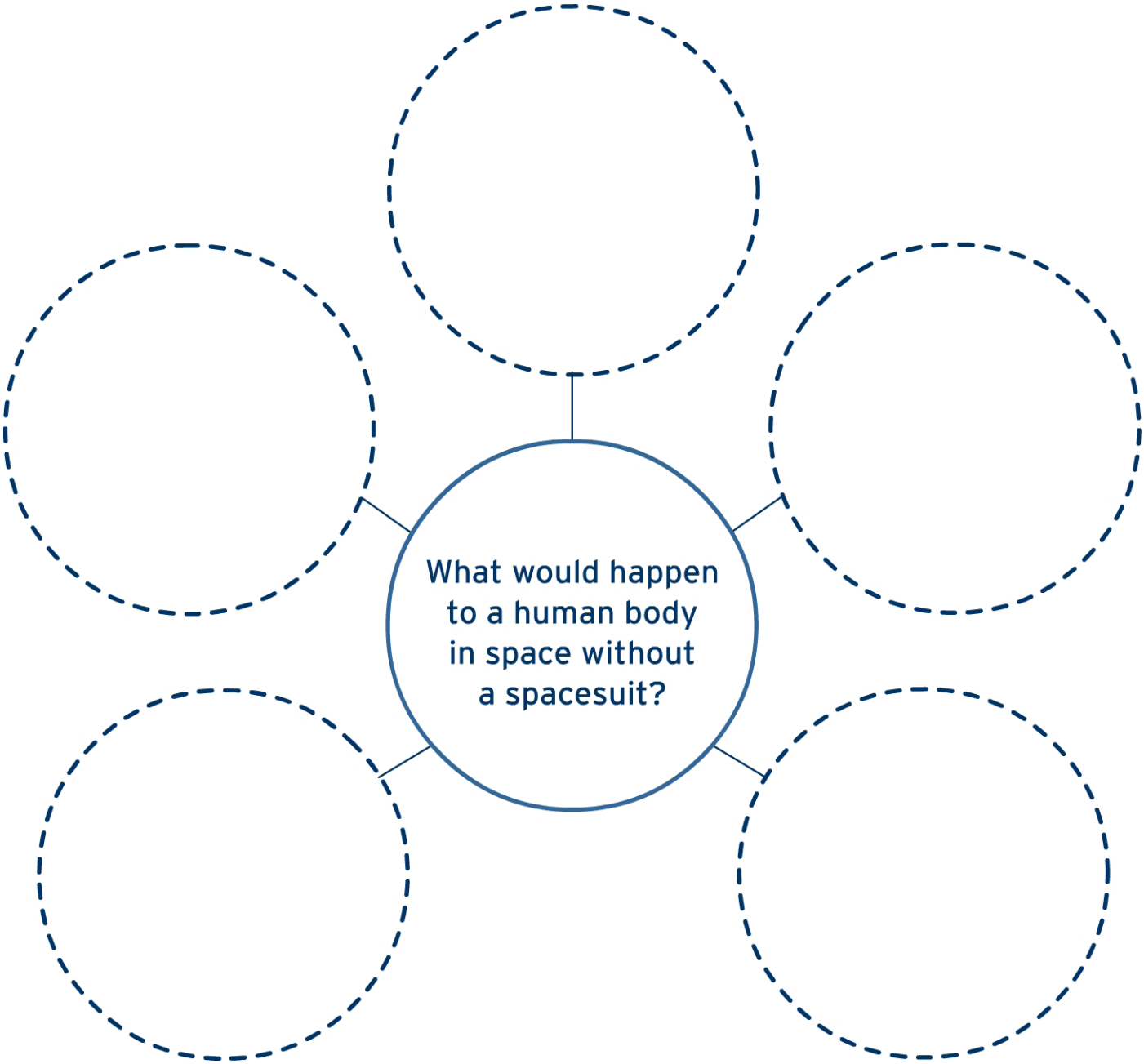
Concept Map

Complete the diagram below with your ideas. Add more bubbles if you need to.

Teacher's note: Discuss with the students what they believe that may look like.



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The Experiment

Watch this video: http://www.youtube.com/watch?v=aleL3K2e9is.

- What do you think is happening?
- Do you want to change some of your answers in the diagram above?

Teacher's note: You can also buy one of these vacuum coffee savers from here http://tinyurl.com/6h5zf4n and do the demo in class.

Think about different parts of your body. What materials could you use to simulate different body parts in the vacuum coffee saver to test what would happen in space?

Make your observations in the grid below and add rows if you need more space. We have started you off!

Teacher's note: You can also watch a series of demonstrations in this video http://www.youtube.com/watch?v=QwEUBt7v624 and ask learners to suggest more examples. Or, use the video to recap and reinforce the learner's observations.

Object used	Part of body simulated	What happened	Limitations of this simulation
Balloon filled with air	Lung	Balloon expands	Rib cage would limit expansion of lungs

- What can you conclude from your observations?
- Do you want to go back to the concept map (bubbles) and change some of your answers now?

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Out of school hours learning activity

Now use various sources of information such as books and the Internet to find out more about what would happen to a human body in space without a spacesuit. The links below are quite useful!

http://imagine.gsfc.nasa.gov/docs/ask_astro/answers/970603.html
http://www.damninteresting.com/outer-space-exposure
http://www.wimp.com/spacesuit/

Finished your research yet? Great!

Now go to http://prezi.com and register if you haven't got an account already.
Then, copy this Prezi: http://prezi.com/dx9uyxdaxvre/my-learning-journey/

And use it to describe your learning journey to discover what happens to unprotected human bodies in space.

Don't forget to share you Prezi with your peers and your teacher!

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