



Active AFL Strategies in a Mixed Ability Classroom

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Tonight's Learning Intentions



INDIVIDUAL ASSESSMENTS



ICT WEBSITES




CLASS ACTIVITIES

Active Learning



Getting students thinking - not necessarily physically moving.



*Tell me and I forget, show
me and I remember,
involve me and I
understand.*

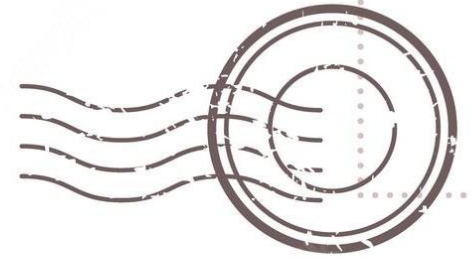
~Benjamin Franklin

Individual AFL

Great for the start or end of class

Post-card to a Friend

POSTCARD



Dear X

Today in class we learned about _____

The most interesting thing was _____

Something you should know before the next class is _____

From Y



KEEP
CALM
AND
STOP
THINK JOT

Stop and Jot

- A simple but effective technique
- Students stop, think, and write about what they are learning at specific points within a lesson to check for understanding.
- Set a timer
- Students explain a concept in their own words

3-2-1 Reflection



DESCRIBE THREE
TAKEAWAYS,



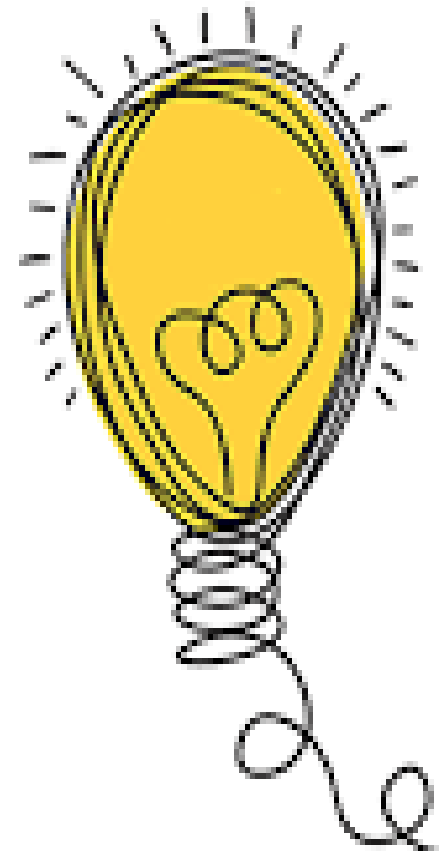
TWO QUESTIONS,



ONE THING THEY
ENJOYED.

Presentation Response

- Students can pick one or you can assign all three sentence starters to reflect on their learning.
 - "I was surprised that...."
 - "I learned that..."
 - "I wonder about...."
- Can be used at the end of a group assessment - realise activity was more than just for their entertainment



Exam Reflections

- What did you do to prepare for the exam?
- What went well?
- What did not go so well?
- What are your next steps?

How are you feeling after this exam? Circle the relevant emoji.



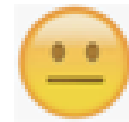
Confused



Happy



Sad



Other

End of Topic/Class Reflection

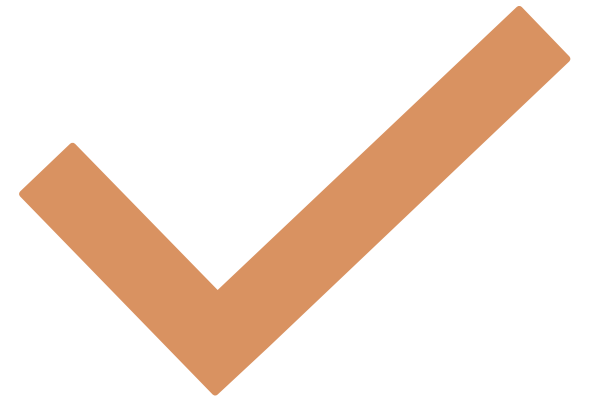
What did I learn

What did my
partner learn

What did we
learn

Target Work – Success Criteria

- Place students in control of their learning
- Cell Structure success criteria:
 - Can I draw an animal cell and put in 3 labels
 - Can I draw a plant cell and put in 5 labels
 - Can I list the functions of each labelled part.
- Students write down success criteria or targets and reflect on them before a test.

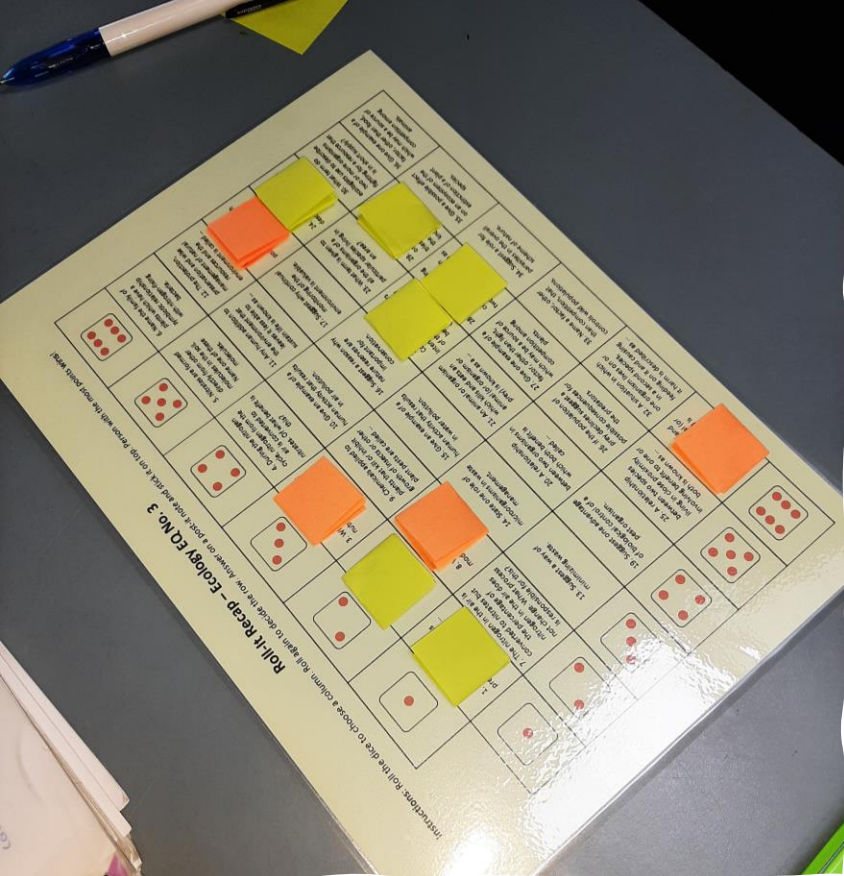


AFL Games

Task Cards

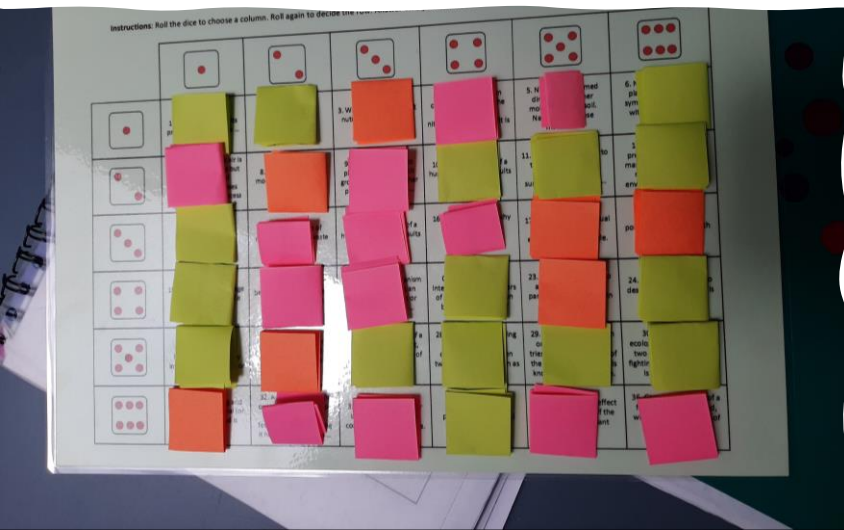
- Revision for units of learning
- In pairs students complete tasks
- Level of difficulty increases through tasks





Roll-it Recap

- Designed by PDST
- Template available on PDST biology website
- Edit template to suit topic
- Students roll a die one to select a row and again to select a column.
- Write answer on a post-it note - most correct answers wins
- Different colour post-its essential.



Revision Relay Activity

- Works well for revising a unit of learning
- Create as many question sheets as you want (5/6)
- 1st sheet easier - allows everyone to progress to next sheet
- Students work in pairs/groups.
- Only one person writes the answers
- Have to put hand up to check answers before moving on.
- Teacher answer key is ESSENTIAL!

Photosynthesis

EFFECT OF LIGHT INTENSITY ON RATE OF PHOTOSYNTHESIS

The graph below shows the results of an experiment where light intensity was varied

1. Suggest a suitable plant for this investigation
2. How was the rate of photosynthesis measured?
3. Name a factor that needs to be kept constant in this investigation.
4. How did you keep your named factor constant?
5. Why was it necessary to keep the named factor constant?
6. How did you keep your named factor constant?
7. What happens to the rate of photosynthesis at X when the investigation is carried out at 25 Degrees? Give a reason for your answer.
8. What happens to the rate of photosynthesis at X when the investigation is carried out at 35 Degrees? Give a reason for your answer.

Respiration Quick Fire

Answer the questions row by row, starting with top left corner.

6 carbon compound in respiration	3 carbon compound made in stage 1	Molecule that enters into Krebs's Cycle	Gas produced during Krebs's cycle	Gas needed for aerobic respiration
Location of Krebs's cycle	Products of Krebs's Cycle	Location of electron transport chain	Molecule that enters into E.T.C	State of electrons at the end of the E.T.C
Final electron acceptor in E.T.C.	Products of the E.T.C	FREE SPACE	Number of ATP produced in Stage 1	True or False. None of the energy released in respiration is lost as heat.
Suggest one	Does the first stage of	To what is pyruvic acid	Name the end products	Name the nitrogenous base and the sugar present in ATP.
				True or false. Plants do not respire.

ENERGY CARRIERS

QUESTION 1
What does ODP stand for?

QUESTION 2
What is the function of O.T.P?

QUESTION 3
How does ODP become O.T.P?

QUESTION 4
What does NOD stand for?

QUESTION 5
What is the Role of NOD/NODP ?

QUESTION 6
Is NODH a high or low energy molecule?

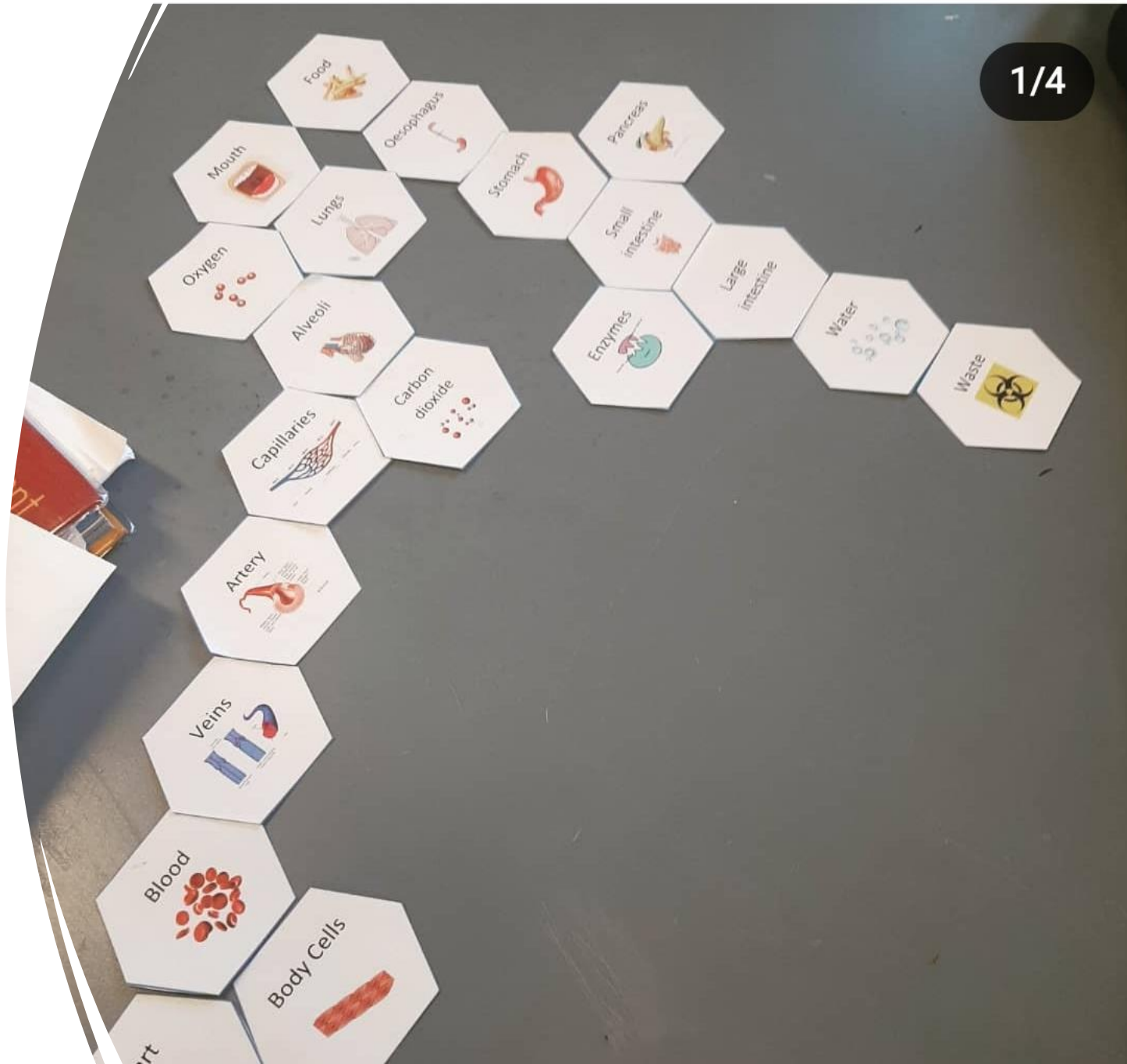
Learning Links

- Give students a set of words associated with a topic or unit of learning
- They have to link all the words together in the correct context
- The more detailed answers the more points



Heagons

- Michael Kavanagh Padlet
- Students have to connect the hexagons to each other.
- Explain to the teacher why they made the connects
- Write a reflection into copies



Find your Match

- I use this as a starter or finisher to my lessons
- I have keyword/phrases printed for the topic.
- I give one to each student and they have to find their match.
- We go around the room and each pair have to explain why they matched.

Structure

Proteins

Anabolic

Photosynthesis

Catabolic

Digestion

Enzyme

Biological

Biochemical
Reaction

Reaction occurring in
living cells, forming a
new substance.

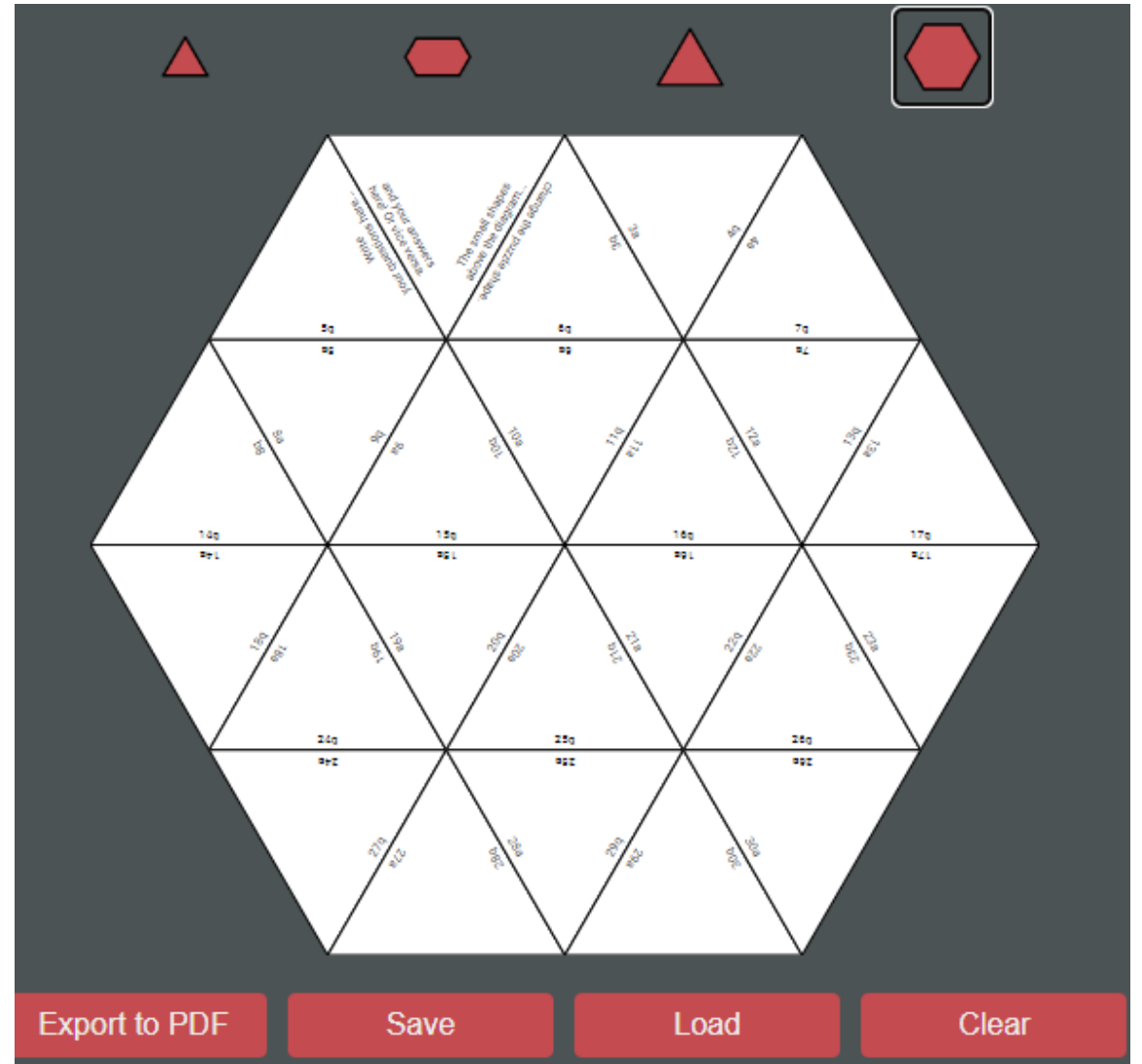
Test for
Hydrogen gas

Lighting split
makes a pop

Test for
oxygen gas

Relights a
glowing splint

Tarsia Maker



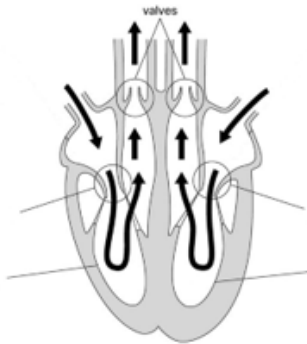
• <https://www.tarsiamaker.co.uk/>

Graphic Organisers

Individual revision and Group Work Activities

Ms. Pierce – J.C. Science

Circulatory System



Blood Vessels

Veins	Arteries	Capillaries

Blood Vessel	From	To	Oxy or Deox

Parts of the Blood	Function

Effect of Diet on the Heart:

Effect of Exercise on Heartbeat:

Explanation:

Effect of Smoking on the Heart:

Ecosystem Definition:

Examples:

Habitat

Niche

Community

Key



Equipment	Diagram	How to use	Collects?

Abiotic Factors:

FACTOR	HOW MEASURED

- Adaptations {
 - Animal
 - Plant:
- Competition {
 - Examples:
- Interdependence {
 - Examples

Conservation:

Examples:

Invasive Species:

Example:

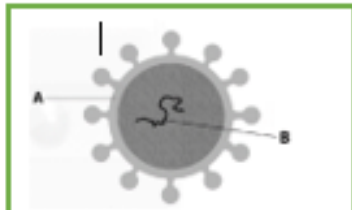
Pollution:

Examples:

Biodiversity:

Waste Management:

Food Chain:



Composition of a Virus:

A =

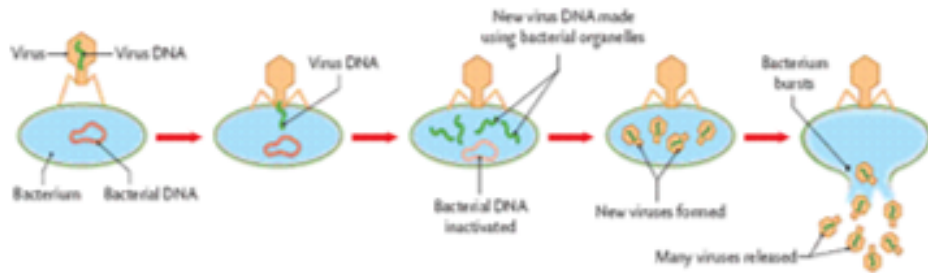
B =

Viral Shapes:

-
-
-

Treatment of Viral Infections

Living Features	Non-Living Features



1.	
2.	
3.	
4.	
5.	

Obligate Parasite:

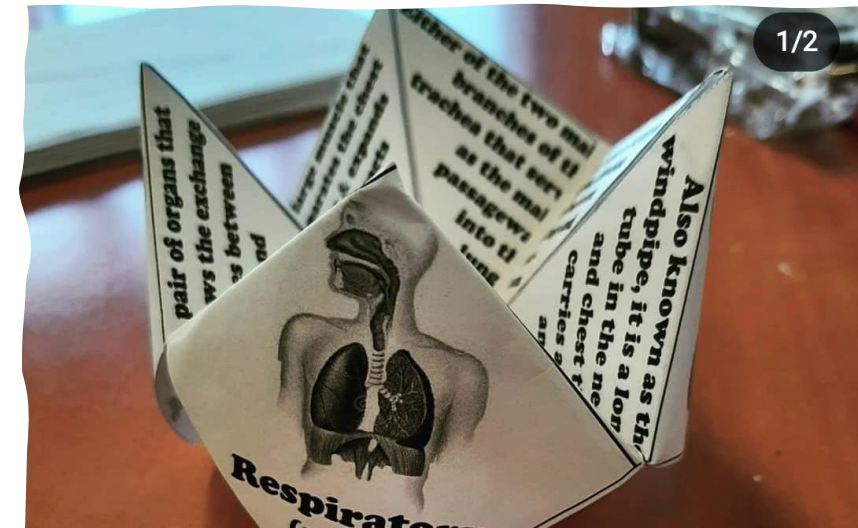
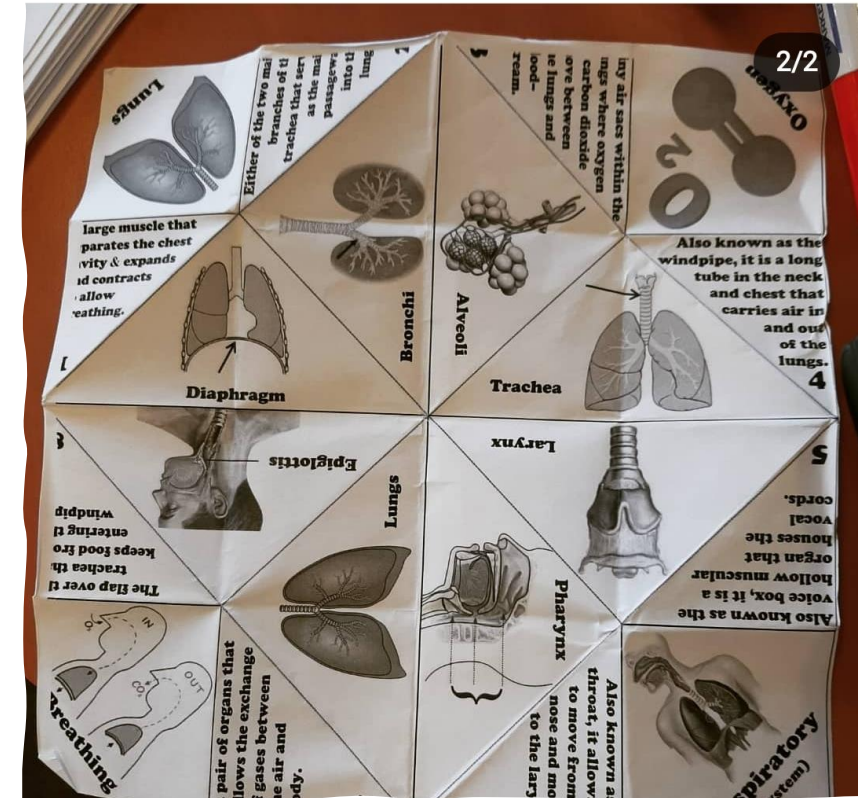
Viral Diseases		
Animal	Plant	Human

Advantages of Viruses:

-
-

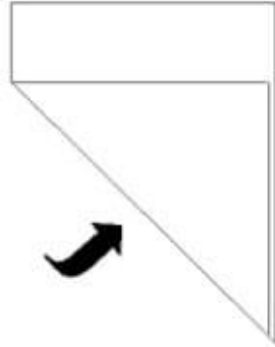
Fortune Tellers

- Simple revision activities
- Only need A4 plain sheets
- Give each student a topic
- They design their own questions and make a fortune teller
- Rotate around the class asking each other questions

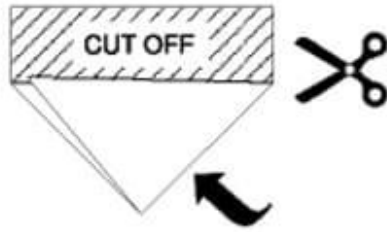




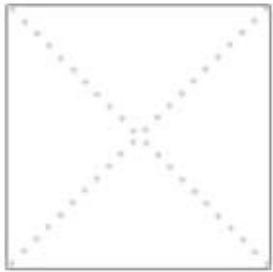
Take an 8 1/2" x 11 sheet of paper*



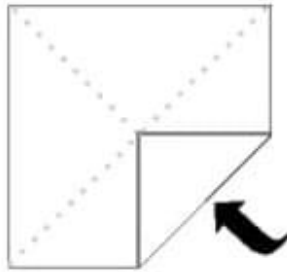
Fold corner up till it meets the other side



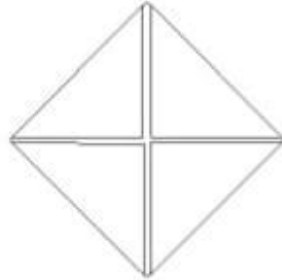
Fold other corner up till it meets the other side—then cut off the rectangle at the top.



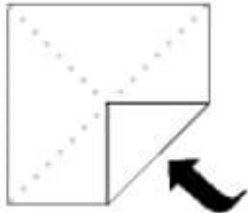
Unfold it and place it printed side down — you should now have an 8 1/2" x 8 1/2" piece.



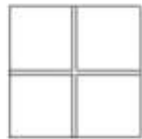
Fold up all four corners so that the points meet in the middle.



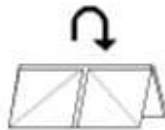
It should now look like this. Flip it over.



Fold up all four corners so that the points meet in the middle.



It should now look like this.



Now fold the top back.



Work your fingers into the four corners from the fold side — work the

Making a fortune teller

Heads-up



- Print key words from a topic/unit of learning
- Groups of 4 (two pairs)
- Timer for 1 minute
- One person from holds the key word up to their forehead, other person tries to explain what it is without using the word.
- The pair with the most correct answers wins
- Do multiple rounds

DeBono's Hats

PROCESS	 Blue Hat - Process Thinking about thinking. What thinking is needed? Organizing the thinking. Planning for action.	CREATIVITY	 Green Hat - Creativity Ideas, alternatives, possibilities. Solutions to black hat problems.
FACTS	 White Hat - Facts Information and data. Neutral and objective. What do I know? What do I need to find out? How will I get the information I need?	BENEFITS	 Yellow Hat - Benefits Positives, plus points. Why an idea is useful. Logical reasons are given.
FEELINGS	 Red Hat - Feelings Intuition, hunches, gut instinct. My feelings right now. Feelings can change. No reasons are given.	CAUTIONS	 Black Hat - Cautions Difficulties, weaknesses, dangers. Spotting the risks. Logical reasons are given.

- "Six Thinking Hats"
- Investigating an issue from a variety of perspectives, but in a clear, conflict-free way.

ICT AFL Strategies

Quizlet Live

- Assign random teams
- Students have to find team member
- Answers divided amongst all team mem
- Wrong answer resets the score
- VERY COMPETITIVE!!!

the study of how charac...

a) Heredity

b) Gene

c) Allele

d) Genotype

DEFINITION AND TERM

Select

Heredity

a) the study of how characte...

b) section of DNA that code...

c) an alternative form of a ge...

d) set of genes an individual ...

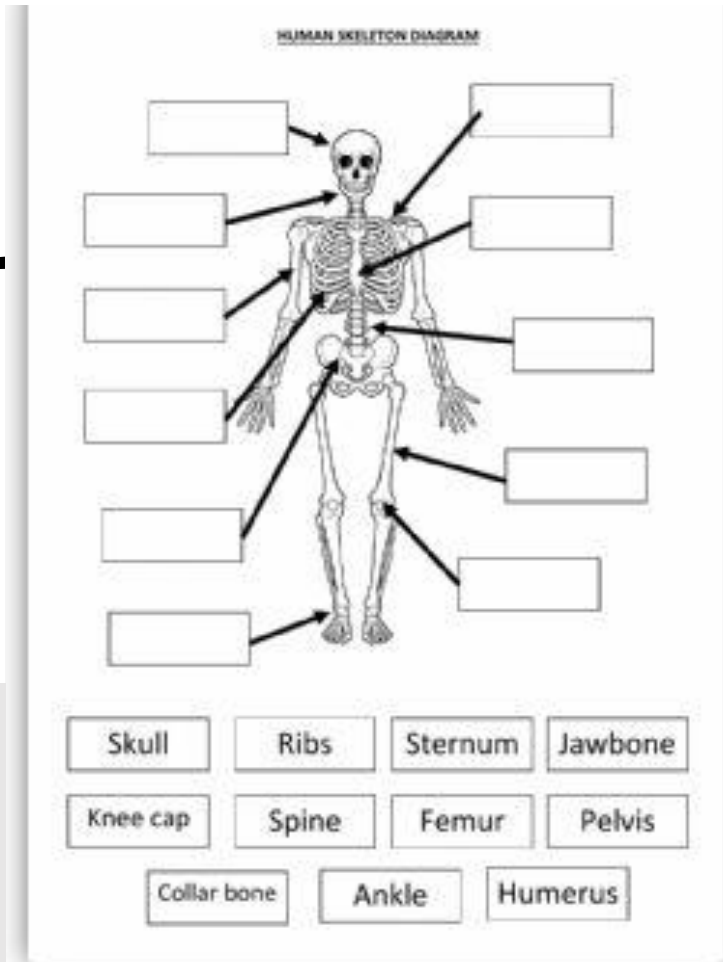
TERM AND DEFINITION

Select

Worksheets Live

- <https://www.liveworksheets.com/worksheets/en>
- Search worksheets online
- Add them to your learning platform
- Quick AFL in the class or as homework

- Add to my workbooks (433)
- Download file pdf
- Add to Google Classroom
- Add to Microsoft Teams
- Share through Whatsapp





The Human skeleton


Ed puzzle


Df




☰  edpuzzle

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 My Content

 My Network

 Notifications

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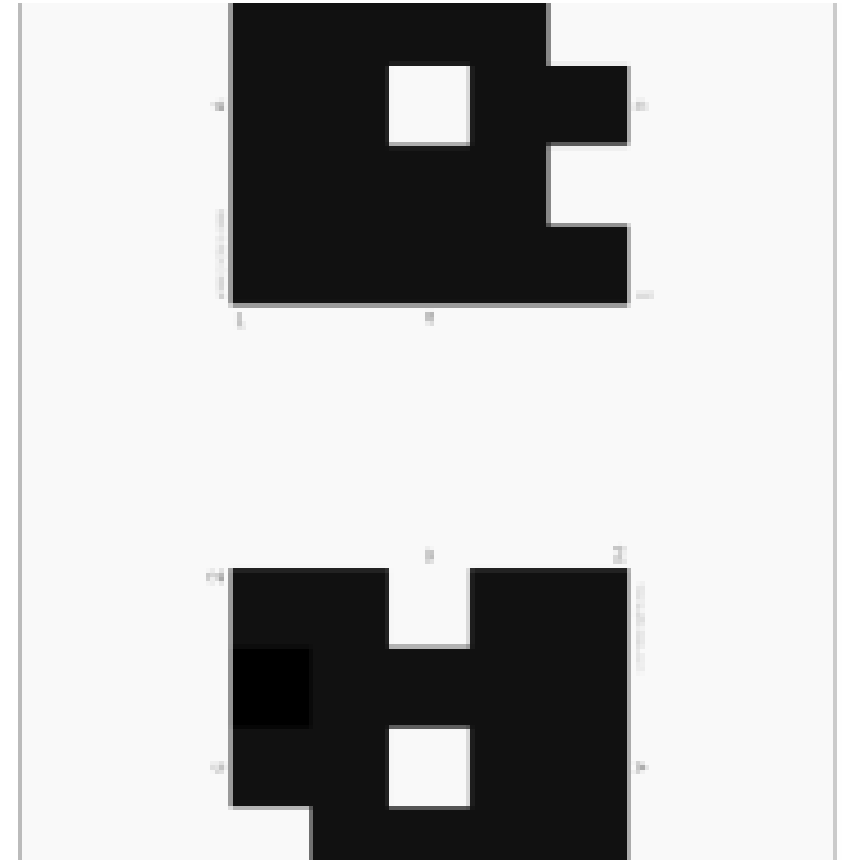
288 other video versions

Video Events

- 00:40
Multiple-choice
- 01:02
Multiple-choice
- 01:20
Multiple-choice
- 01:32
Multiple-choice
- 02:01
Multiple-choice
- 02:45
Multiple-choice
- 03:22
Multiple-choice
- 03:40
Multiple-choice

Plickers

- Download plicker cards
- Cards 1-30
- Matt laminate
- App - ios/ apple
- Create class list on website - assign number to specific student
- Create questions
- Students respond A, B C or D (depending on orientation of card)
- Get real time formative assessment





Thank You

Any questions.....