Video worksheet – Cells

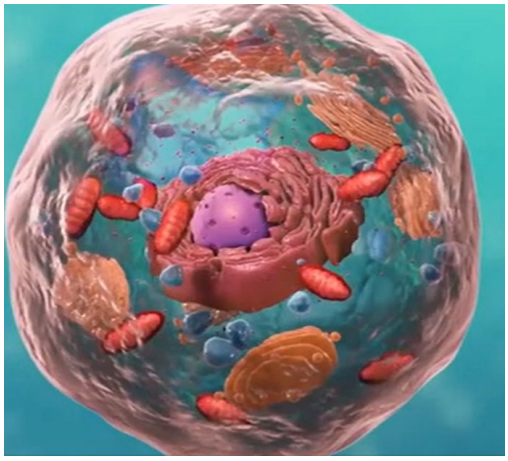
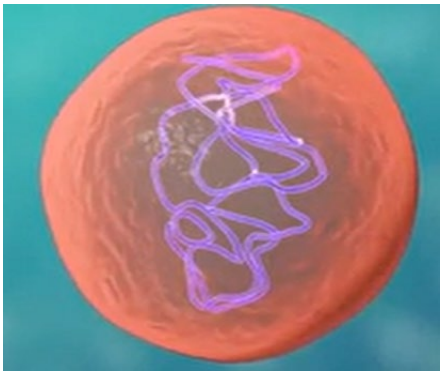
1. What are three things that all cells have ?

a. _____

b. _____

c. _____

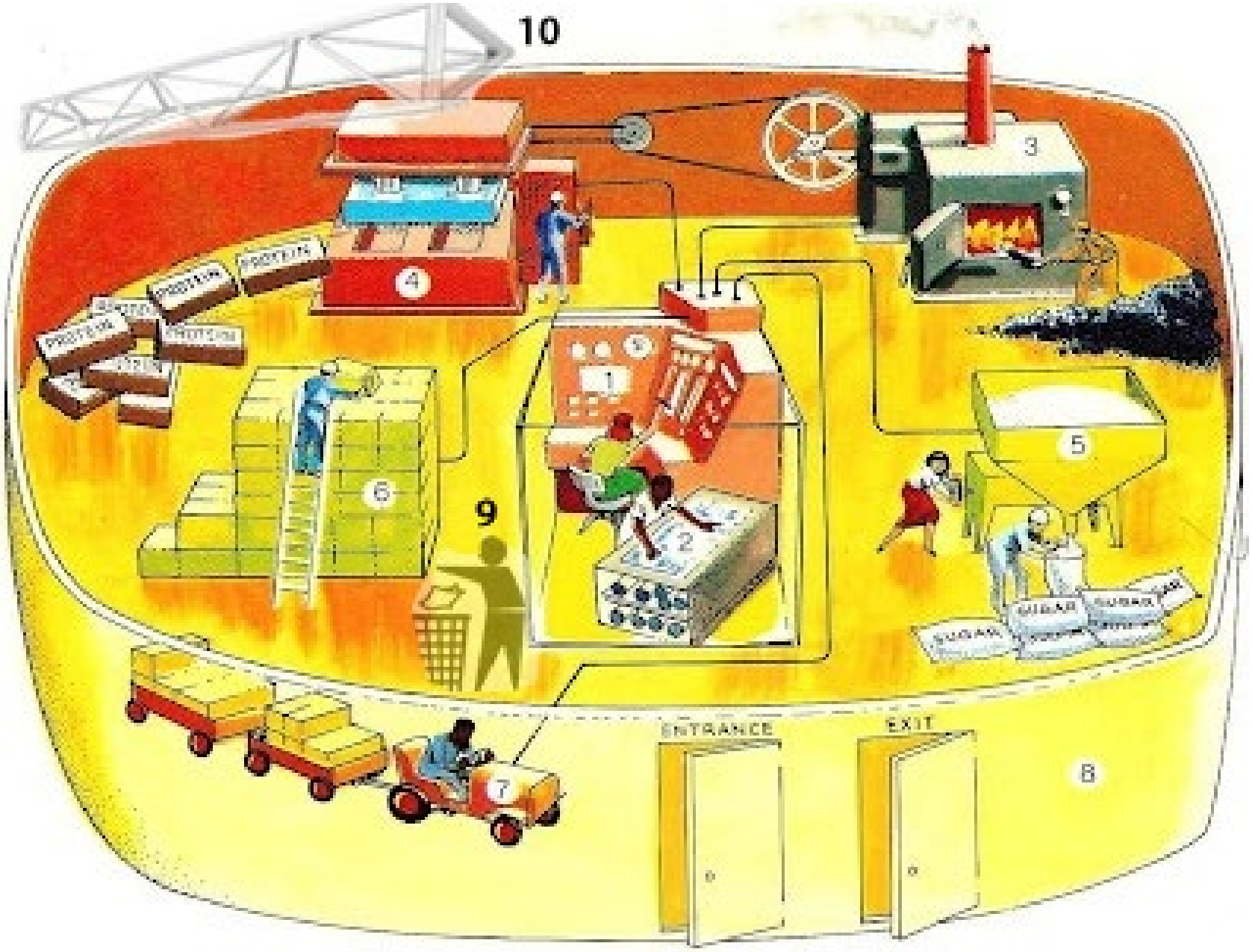
2. There are two categories of cells, eukaryotic and prokaryotic.
   Describe the differences between a eukaryotic cell and a prokaryotic cell.
   In your answer, include differences in, size, complexity and organelles and whether they are single-celled or multicellular.

Eukaryotic cell	Prokaryotic cell
	

Organelles

View the video and complete the table below.

Organelle	Function
Nucleus	
Ribosome	
Golgi apparatus	
Cell membrane	
Genetic material	
Lysosome	
Cytoskeleton	
Mitochondria	
Endoplasmic reticulum (ER)	
Storage Vacuole	


10
3
4
PROTEIN
PROTEIN
PROTEIN
1
5
6
9
SUGAR
SUGAR
SUGAR
ENTRANCE
EXIT
7
8

Description	Factory part number	Name of organelle Explain why you selected this organelle
Office control centre	1	
Original plans	2	
Furnace to provide power to the factory	3	
Machine to make protein from the instructions on the plans	4	
Packaging of sugars ready for distribution	5	
Storage of processed material	6	
Transport of material to different parts of the cell	7	
Doors and walls control who comes in or out	8	
Waste disposal or shredder.	9	
Scaffolding	10	
Shop floor or internal space of the factory	Not numbered in image	

"Snakes and Organelles" – Cell Journey Game

Goal: Reach the **Nucleus (Finish)** while surviving the cell's transport and processing systems.

What You Need:

1. Game Board (6x6 or 8x8 grid) – Numbered squares from 1 to 36 or 64.
2. Dice – One per group.
3. Game Pieces – One per player, such as coins, buttons.
4. Organelles as Snakes and Ladders – Use the table below.
5. Instructions sheet (printable rules).
6. Optional – Small cards with organelle facts/challenges.

Sample Board Mechanics:

Replace "snakes" and "ladders" with cell-based effects:

Square	Organism Event	Effect
5	Lysosome	You got digested – Go back to start
9	Golgi Body	Your protein gets packaged – Jump ahead to 18
13	Vacuole	You're in storage – Miss a turn
17	Ribosome	You get synthesised – Move ahead 4 spaces
20	Transport Vesicle	You get shipped – Move to 30
24	Smooth ER	You detoxify – Skip a snake ahead (if within next 3 spaces)
28	Mitochondrion	You got energy boost – Roll again
33	Plasma Membrane	Exported out – Back to 10
36	Nucleus	You've reached command centre – **You win!**

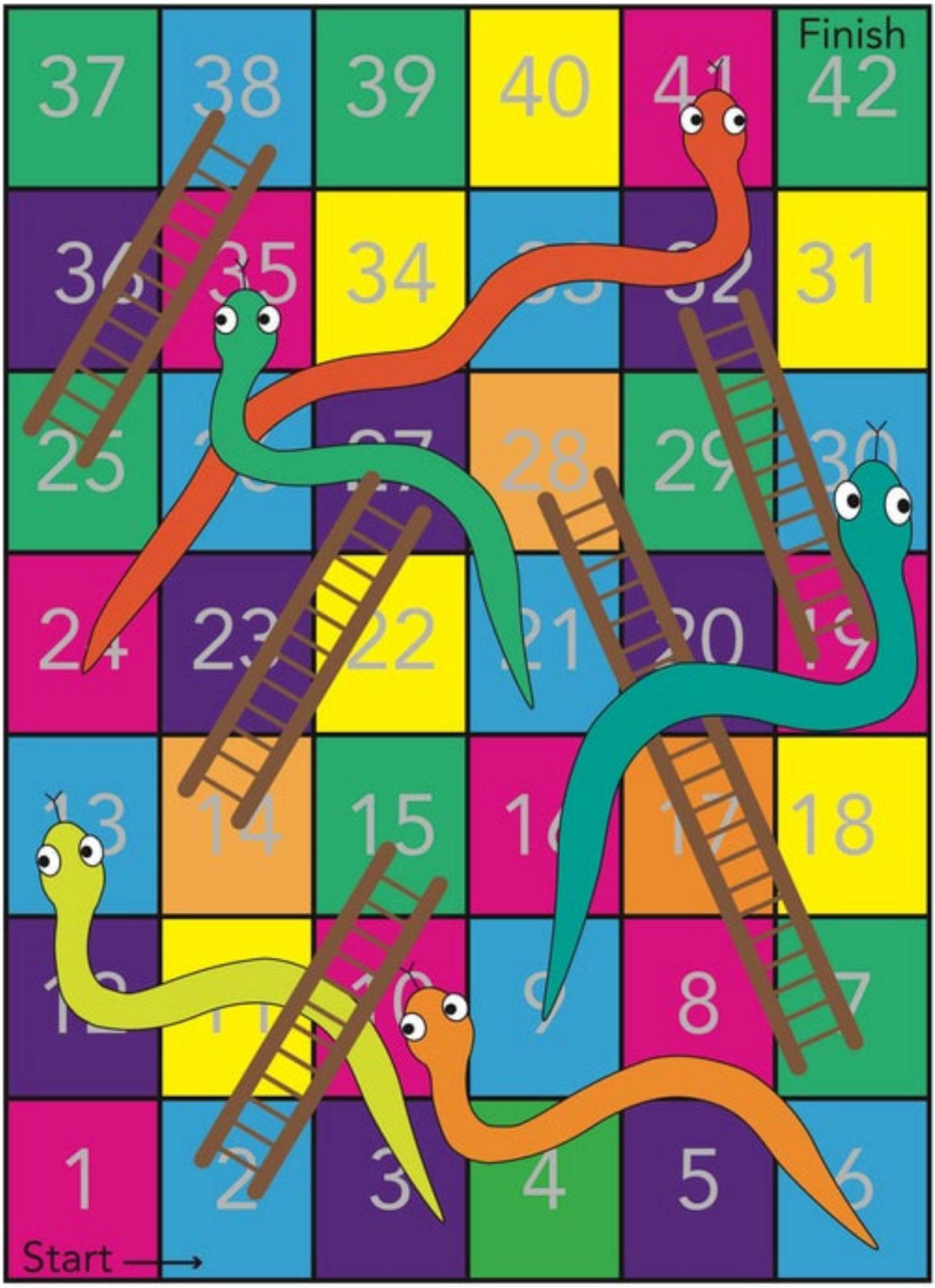
Optional: Organelles Challenge Cards (examples found at the end of this document)

To add more learning, include cards students must answer when landing on certain organelles.

Example:

- **Card (Mitochondria):** What does this organelle produce? *(Answer: ATP/energy)*
- If correct: move 2 spaces forward. If not: stay put.

Snakes and Ladders



Pond Life & Organelles Quiz Cards (Foldable)

Side	Answer Side
The ribosome makes: A) Cytoplasm B) Protein C) Fats D) Sugars	B) Protein
The function of the nucleus is to: A) Store water B) Make energy C) Question Control the cell and hold DNA D) Remove waste	C) Control the cell and hold DNA
Paramecium moves by using a: A) Flagella B) Cilia C) Pseudopodia D) Fins	B) Cilia
Which structure provides energy for a cell? A) Golgi body B) Mitochondria C) Nucleus D) Ribosome	B) Mitochondria
What helps Euglena detect light? A) Vacuole	B) Eyespot

B) Eyespot (stigma) C) Nucleus D) Chloroplast	
The cytoplasm is: A) A cell wall B) A nucleus C) Jelly like fluid that fills the cell D) Energy storage	C) Jelly like fluid that fills the cell
A rotifer can often be seen doing what? A) Photosynthesising B) Spinning or using cilia to feed C) Dividing rapidly D) Making sugars	B) Spinning or using cilia to feed
Which organelle packages and sends proteins? A) Nucleus B) Golgi apparatus C) Lysosome D) Chloroplast	B) Golgi apparatus
What organelle helps with photosynthesis in pond life? A) Nucleus B) Ribosome	C) Chloroplast

C) Chloroplast D) Mitochondria	
Which pond organism can behave like a plant and an animal? A) Paramecium B) Amoeba C) Rotifer D) Euglena	D) Euglena
Which part of the cell controls what enters and leaves? A) Cytoplasm B) Cell wall C) Cell membrane D) Nucleus	C) Cell membrane
Which organelle is filled with digestive enzymes? A) ribosome B) lysosome C) mitochondria d) nucleus	B) lysosome