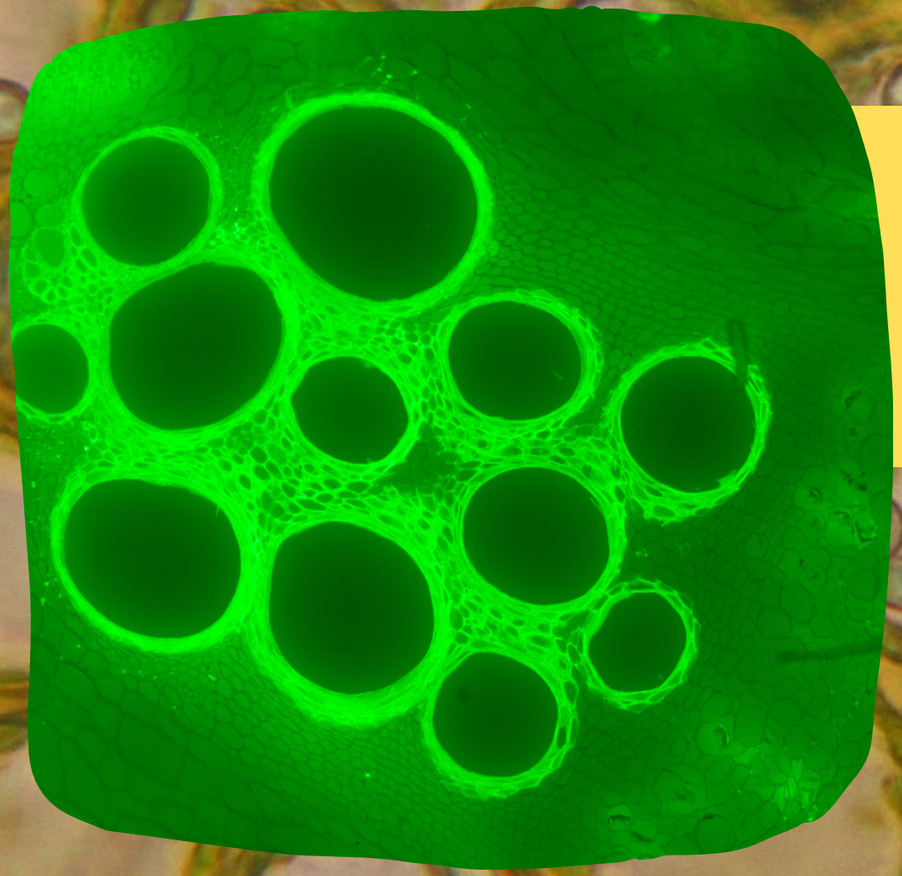
Special Ed

4 UNITS 11 WEEKS

BASIC BIOLOGY BUNDLE



BONUS

Special Needs for Special Kids

ALSO INCLUDES GOOGLE SLIDES

This bundle includes resources created for students with significant challenges (like autism and ID) who were several years behind their peers. This is a great way to expose all students to the same curriculum their peers are following.

This bundle includes 3 different units that are typically taught in high school. It includes:

1. Levels of Organization (3 weeks)
2. Cells and Cell Processes (3 weeks)
3. Mitosis and Meiosis (3 weeks)
4. Genes and Heredity (2 week)

All units have printable AND digital versions

All the units contain similar activities so students become familiar with the format and can concentrate more on the content. Although there is some variation, each unit has:

- Detailed lesson plans
- A book PLUS a pre-recorded PowerPoint show and movie version
- Vocabulary cards
- Circle maps
- Sorting activities
- Labeling and sequencing activities
- Hands on activities
- Vocabulary puzzles
- Close worksheets (fill in the blank)
- Assessments (3 versions)

All units have printable AND digital versions

Table of Contents

Also included with this unit is a power point show that is narrated and has automatic advancement of slides. Let me know in the feedback if this was helpful ☺

Also included with this unit are detailed lesson plans in a separate Let me know in the feedback if this was helpful ☺

Genes and Heredity Digital Activities

- There is a digital version of each activity from this unit.
- There is also a second version of each activity that is either errorless or has color coding added for students who need more support.
- The file includes both versions of each activity.
- When you click the link on the next page to access the activities, you will be prompted to make a copy.
- My suggestion would be to make a copy for each student. Then go through each activity and delete the slides that are not appropriate for that student. Each student will then have their own individualized group of digital activities.
- There is also a link to the power point that you can show as a video rather than a power point.

- I hope you find this additional ability to complete these activities on-line helpful for you and your students.

Link to digital activities

- Genes: The Magic Code video CLICK HERE

- Digital activities CLICK HERE

If you have any problems or concerns, please feel free to contact me at specialneedsforspecialkids@gmail.com

Thanks,
Christa Joy

Every unit has a table of contents. There is a separate file with directions and links to the digital activities.

Genes and Heredity Lesson Plan

Preparation

- Print out a vocabulary board for each student to use throughout unit
  - Laminate or place in page protector
- Book
  - Print out, laminate, and bind
  - OR your students can listen to the pre-recorded version
- Vocabulary cards
  - Print out a set of cards onto cardstock and laminate
  - Make one set for each student and also one for the teacher to use in I Spy games

Preassessment (do day 1 before starting lesson)

- Choose the form of the assessment that best fits the learning level of your students
- Give the assessment to assess what your students may already know
- I cannot emphasize enough how important this step is. If you want to see growth, this preassessment is so important!!

Teaching Tips

- *Color Coding*: this is a really easy way to add more structure to a matching activity. Outline or color in an empty box or sorting label. Outline or color in the corresponding picture symbols the same colors. Becomes a color matching task.
  a. For more info, read more here: https://specialneedsforspecialkids.org/2015/09/05/using-color-coding-for-differentiation/
  b. I also have a blog post on differentiating one activity 3 ways: https://specialneedsforspecialkids.org/2018/10/22/differentiating-1-activity-3-ways-easily-and-effectively/
- *Make you own copies of the activities*: Every c
  yesterday. For that reason:
  a. I often complete the activity myself and
  that I could use year after year.
  b. My copies were also helpful as either a r
  more support or as a way for more adv
  work.

Quick Look

Day	Activity	Day	Activity
1	• Book • Vocab cards introduction • Circle map	7	• Book • Vocab cards cut and paste • Word search
2	• Book • Vocab cards activity • Circle map	8	• Book • Vocab cards cut and paste Sudoku puzzle
3	• Book • Vocab cards activity • Labeling activity	9	• Book • Vocab cards activity • Close worksheet
4	• Book • Vocab cards activity • Boy or girl activity	10	• Book • Vocab cards activity • Close worksheet
5	• Book • Vocab cards activity	11	• Assessment • Make editable DNA

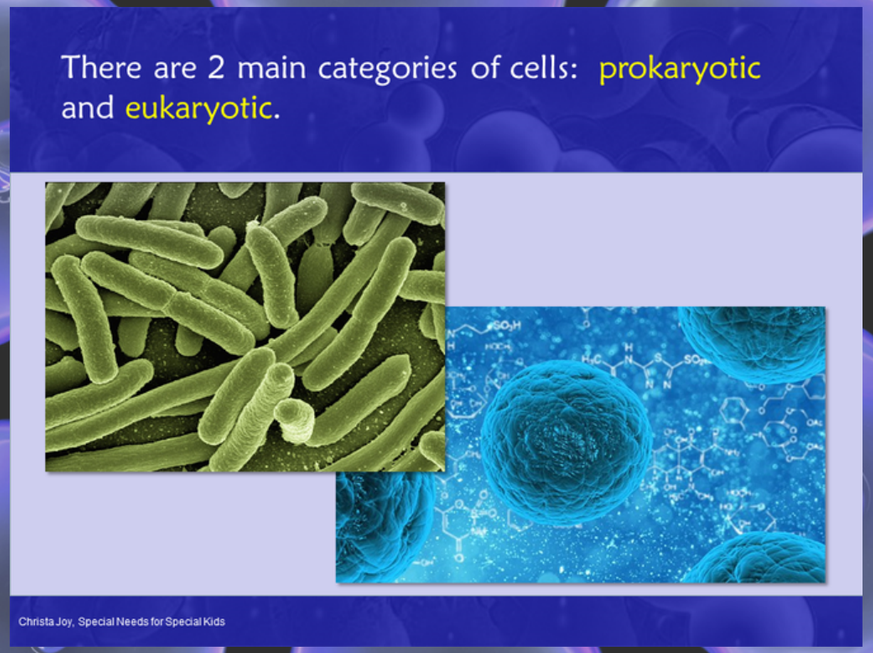
Day 2

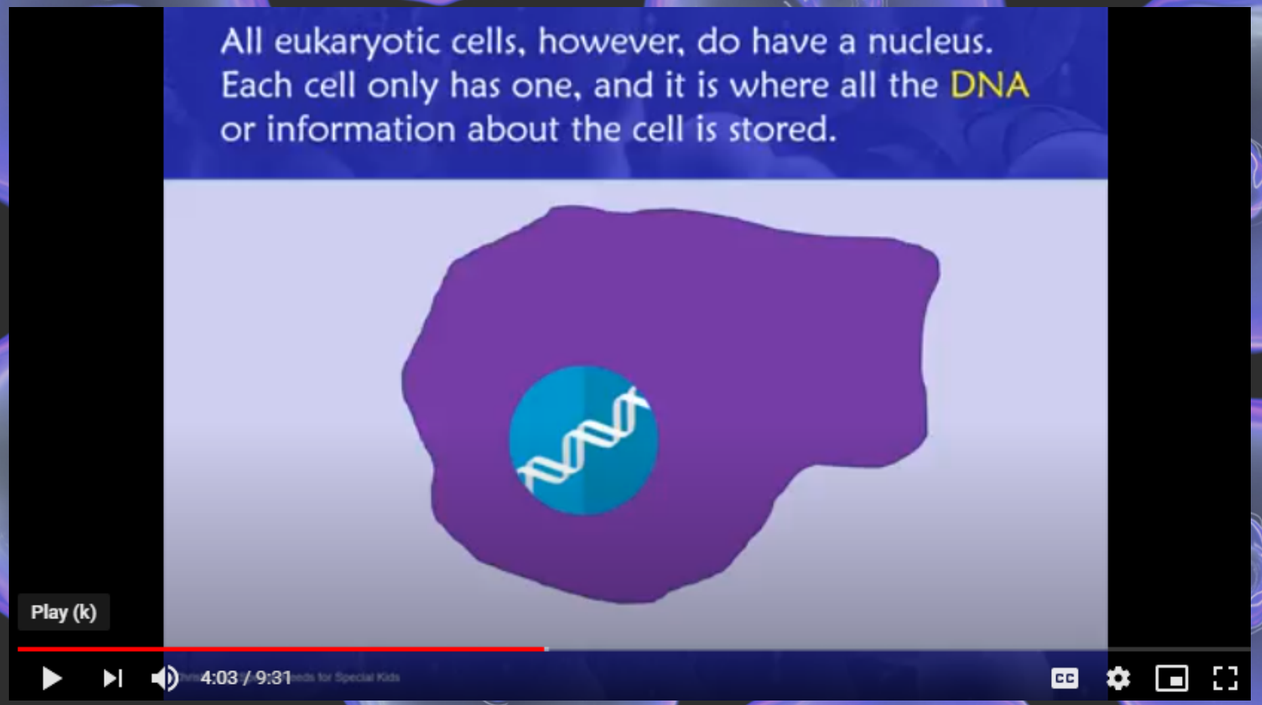
Activity	Notes	Materials
Read or listen to a recording of the book (10 minutes)	• Read through the story, asking lots of questions • Continue to make connections between book and vocabulary board	• Book • Vocabulary board

Vocabulary cards I Spy Game (10 minutes)	• I play this game, or variations of it the first few days
	  ○ Determine how many cards your students can handle in front of them.
	• Since this is the first time playing this game, I make it easy. Hold up a card, and have students find the matching one and hold it up
	• Discuss relevant points on the card
	  ○ You can also play this game in this manner having them find the symbol on their vocabulary board
		• Vocabulary cards (student set and teacher set)
		• Vocabulary board

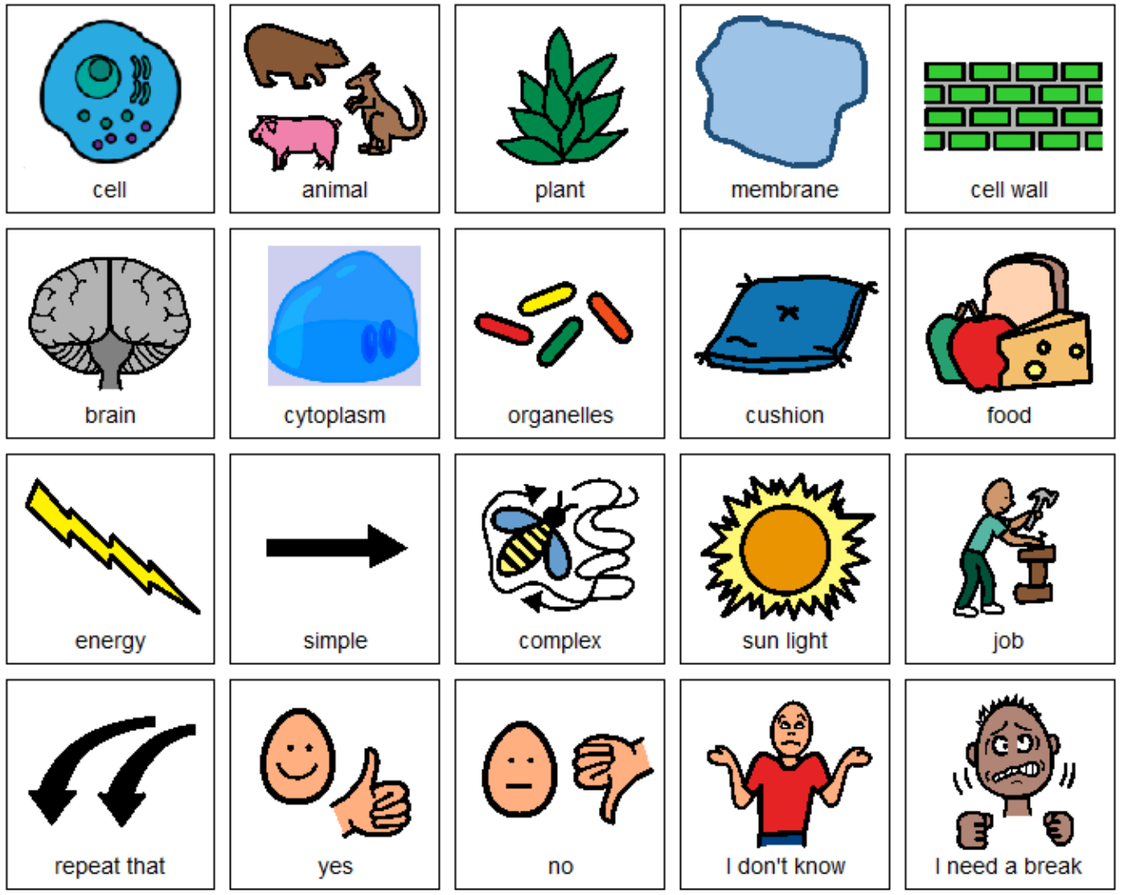
Circle map review (5 minutes)	• Review the circle map completed yesterday	• Circle map completed yesterday
Circle Map (10 minutes)	• Do the circle map about heredity • Choose the best version (errorless or not) depending on the learning level of your students • Students cut out symbols and place in circle map • Make connections to the book as necessary	• Circle map • Scissors • Glue
Sharing (10 minutes)	• Each student shares their finished worksheet with the group using the communication method of their choice	• Completed worksheet • Communication devices

Every unit has a detailed lesson plan with suggestions, a quick look, and a daily step-by-step guide.





Every unit has a book with simple text and engaging photos. It comes in a pdf, recorded PowerPoint show, and an mp4 file.



Every unit has a vocabulary board to use while working through the unit. Suggestions for use are included.

cell

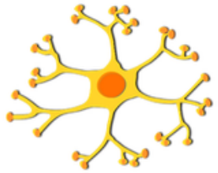
Building block of all living things.

prokaryotic

Very simple cells with no nucleus. Bacteria is an example.

eukaryotic

More complex cells with a nucleus and organelles. Most plant and animal cells are examples.

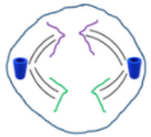


cell membrane

Goes around the outside of all cells and regulates what comes in and goes out.

anaphase

Stage 3. Spindles from the centrioles pull the pairs of chromosomes apart to opposite sides of the cell.



telophase

Stage 4. A new nucleus forms around each set of chromosomes. Cell pinches in the middle.

chromatin

Genetic material in nucleus during interphase; loose coiled strands.

chromosome

Made up of DNA, they tell the cell what to do.

Every unit has 15-20 vocabulary cards. There are suggestions for daily group activities to review these.

cell

Building block of all living things.

prokaryotic

Very simple cells with no nucleus. Bacteria is an example.

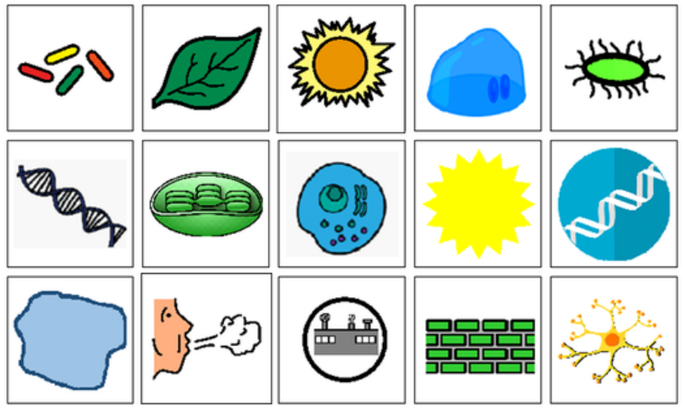
eukaryotic

More complex cells with a nucleus and organelles. Most plant and animal cells are examples.

cell membrane

Goes around the outside of all cells and regulates what comes in and goes out.

Cut apart and match pictures with definition.



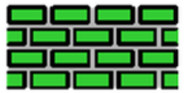
There are also cut and paste activities to review the images used as well as the definitions.

Organelles that are like factories and create proteins for the cell to use.

Building block of all living things.

Organelle found only in **plant cells** and turns sunlight into energy.

cell wall



cytoplasm

organelle

nucleus

Errorless version

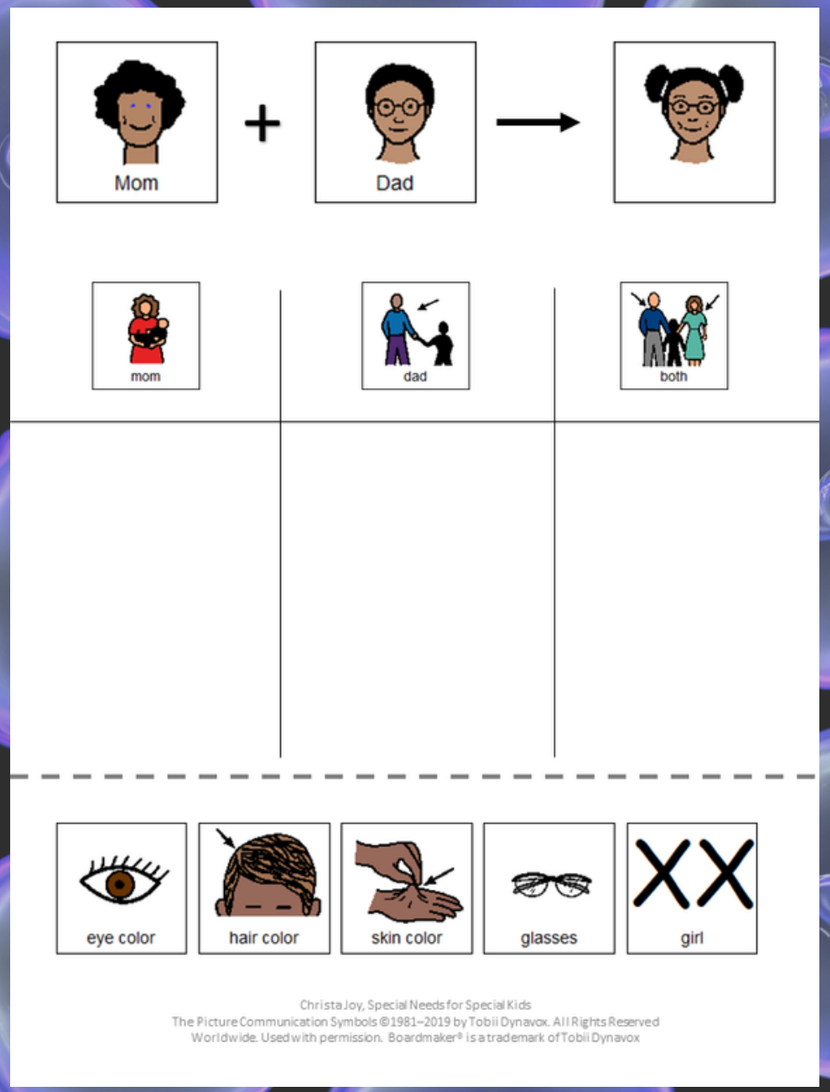
Cut apart pictures and place in circle map about genes.

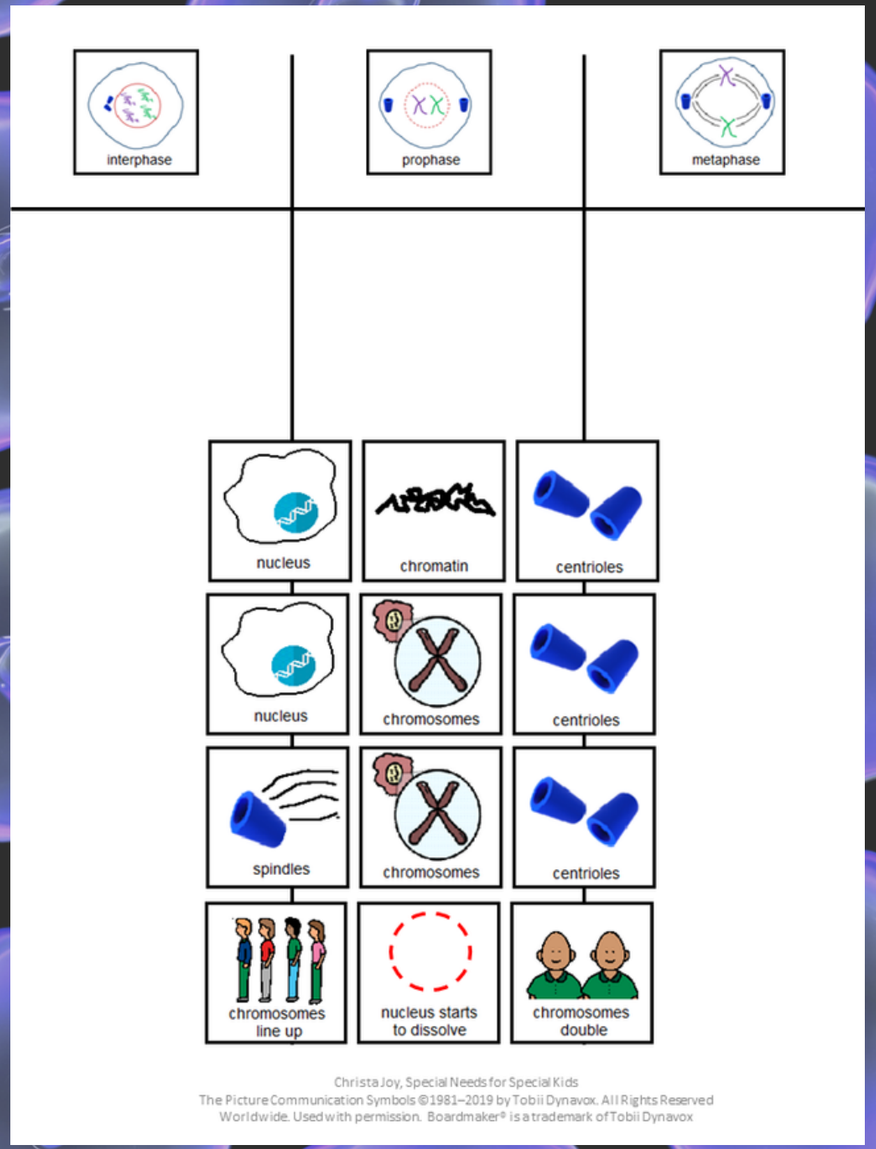
double helix	genome	DNA	Mendel	Watson & Crick
gene	nucleotides	chromosome	nucleus	alleles

Cut apart pictures and place in circle map ONLY IF they relate directly to genes.

double helix	genome	DNA	rocket	Watson & Crick
bacon	nucleotides	paper	nucleus	alleles
gene	needle	chromosome	Mendel	roll dice

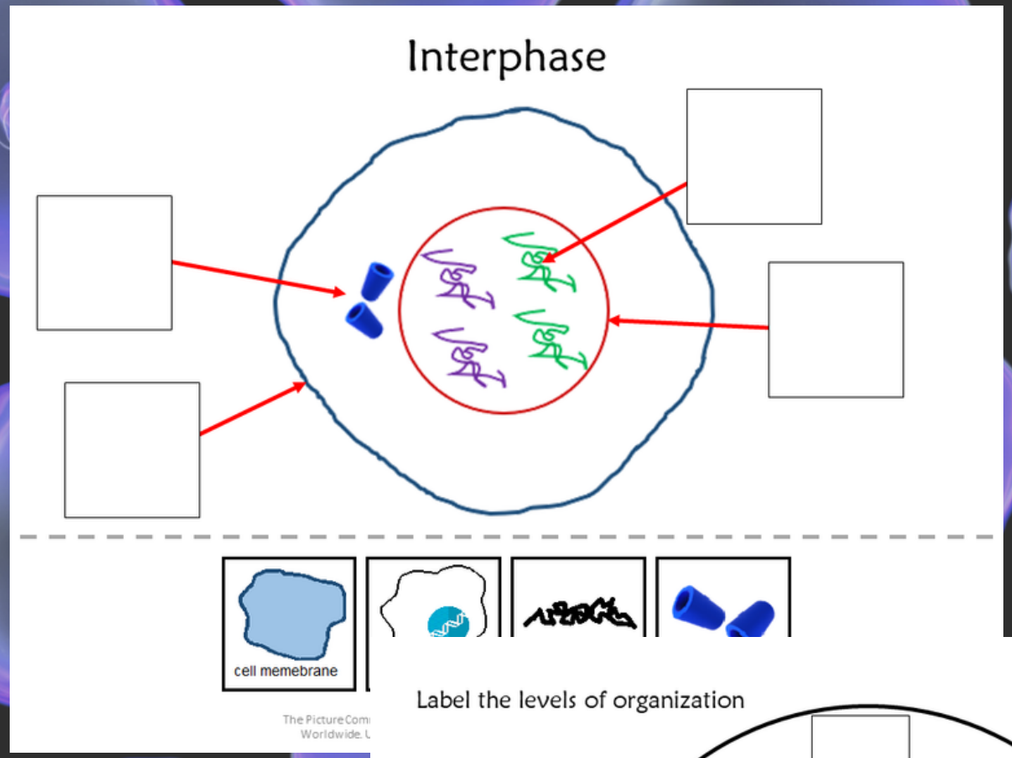
Each unit comes with 1-2 circle maps to visually review the main facts from the book. These come with an errorless option and an option with wrong answers mixed in.

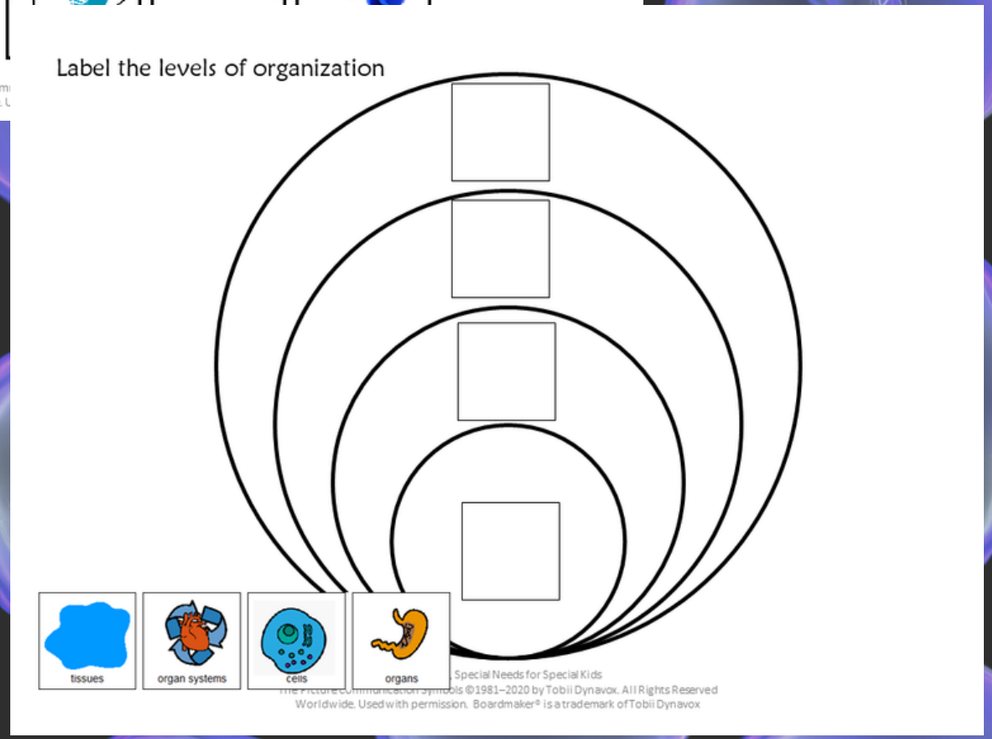


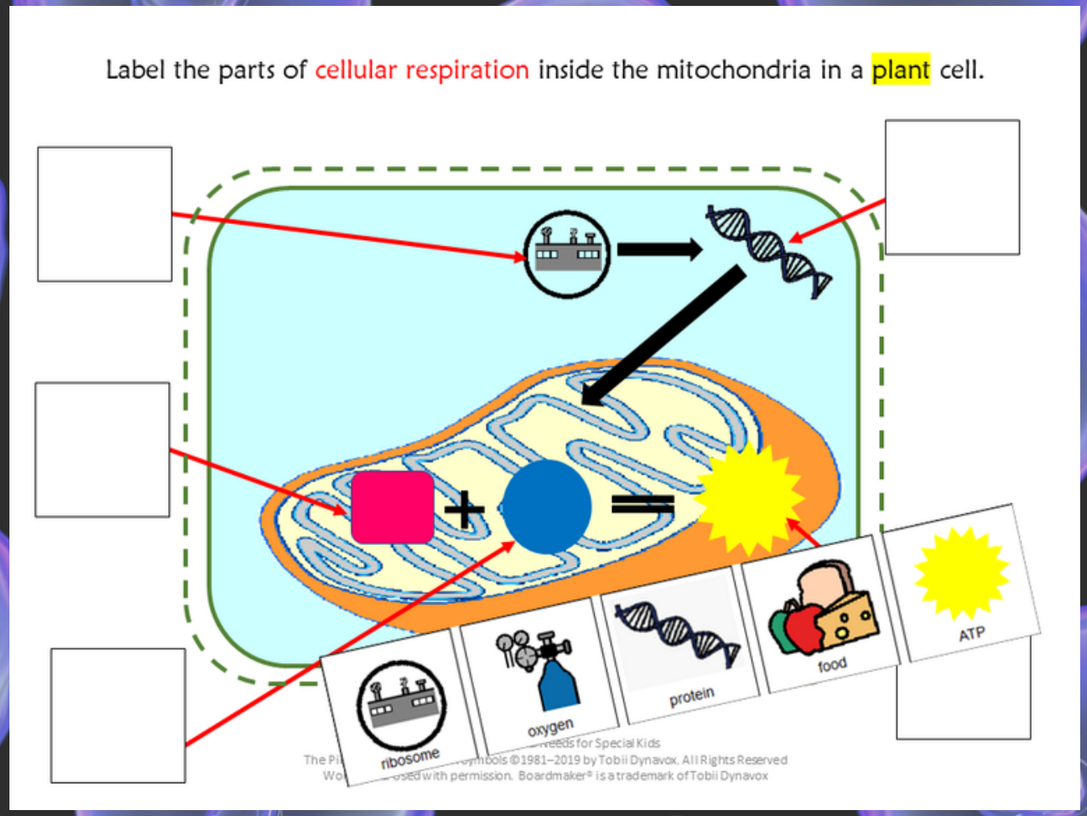


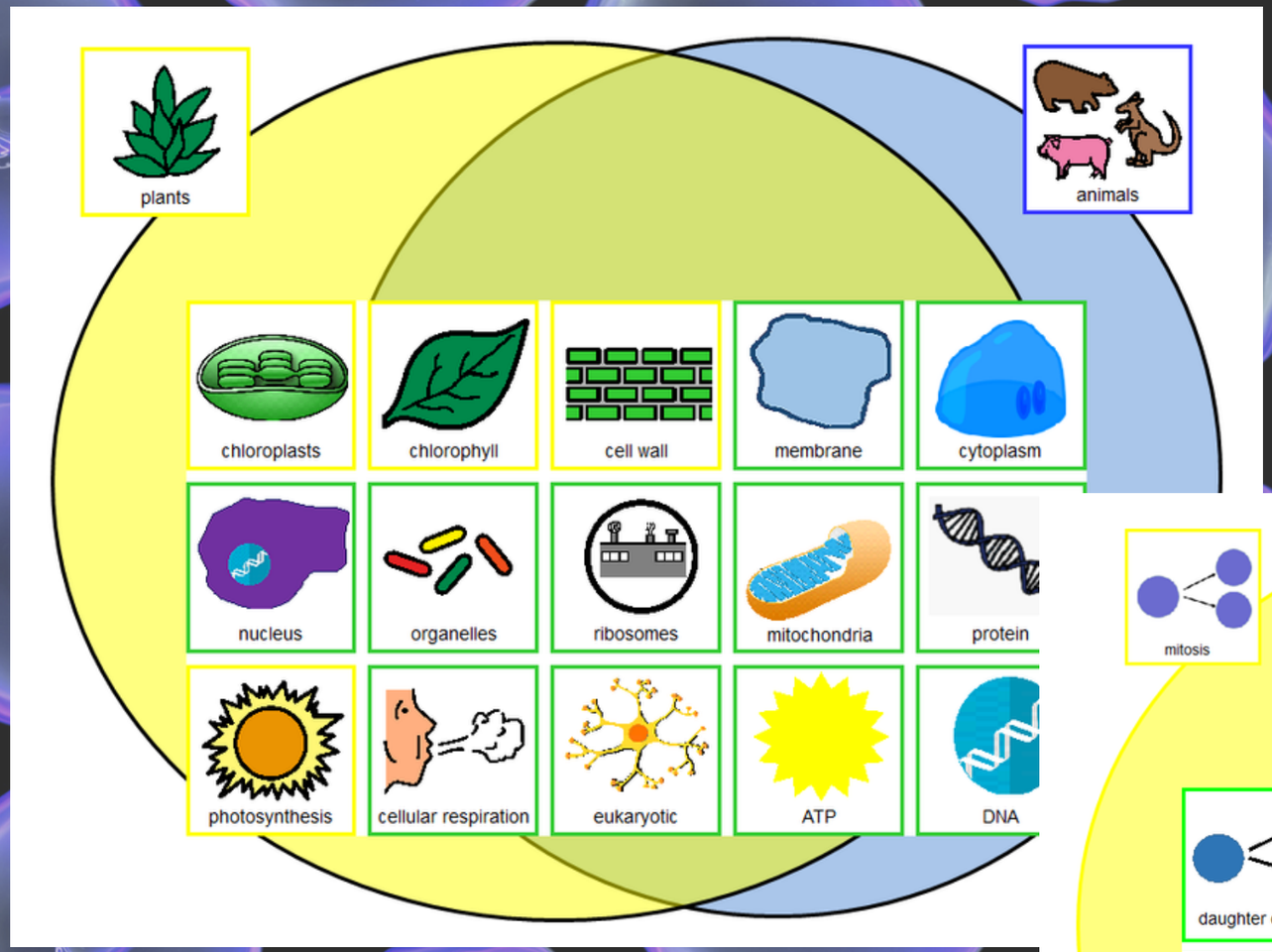
Most units have sorting activities. There are suggestions for how to differentiate these quickly included.

All of the units have labeling worksheets. Suggestions for differentiation are included.

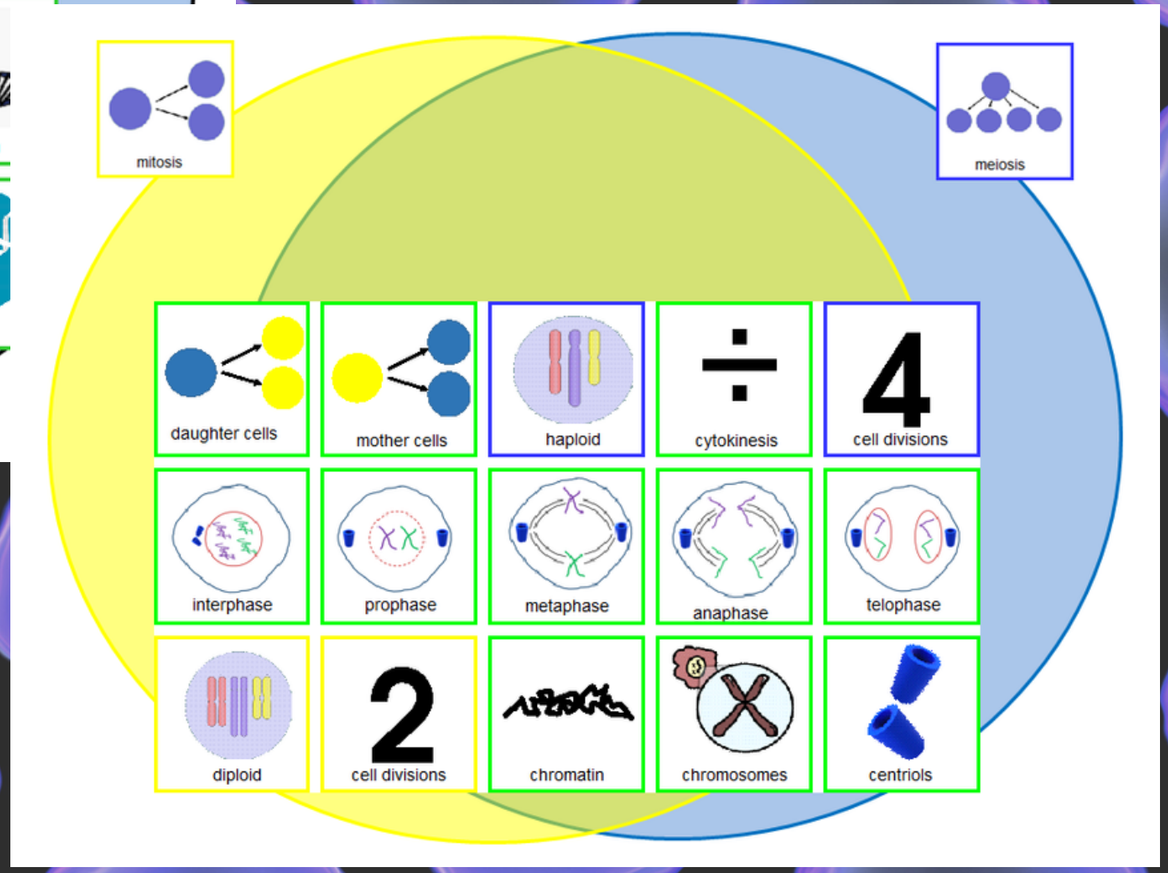








2 of the units contain Venn Diagrams. Differentiated versions using color-coding are included.



Making a Cell Pizza (Sweet)

Materials

- Crescent dough or premade large cookie (cooked)
- Frosting
- Chocolate chips
- Jelly beans
- Green skittles or M&Ms
- 1 Oreo

Directions

- *Cell membrane/wall*
  - Have students spread crescent dough if using
  - Talk about how the crust is like the cell membrane/wall
    - Provides stiffness/structure
    - Holds all the inner parts of the cell
- *Cytoplasm*
  - Spread the frosting
  - Talk about how the frosting is similar to the cytoplasm
    - Provides cushion
    - Helps holds inner structures in place
- *Organelles*
  - Use chocolate chips for the ribosomes
  - Use jelly beans for the mitochondria
  - Use green skittles or M&Ms as chloroplasts
  - Talk about how they are like the organelles
    - Uniform in size and shape
    - Spread throughout the cytoplasm and cushioned
- *Nucleus*
  - Place whole Oreo in center of pizza as nucleus
  - Talk about how the Oreo is similar to the nucleus
    - Only one present in the cell
    - Round

3D Model of a Plant Cell: Directions

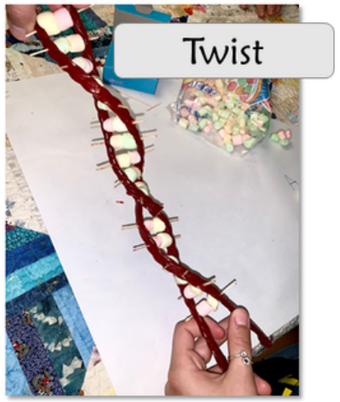
Materials:

- Cell membrane: long piece of yarn
- Cell wall (*if doing a plant cell*): Hula hoop
- Ribosomes: ping pong or other small ball
- Mitochondria: Legos
- Chloroplasts (*if doing a plant cell*): Green bean bags
- Nucleus: Pink ball
- Cytoplasm: Piece of yellow felt or fabric cut to fit the interior of the hula hoop
- Proteins: plastic links (Several connected together)

Directions:

- Give each student a piece of the cell; can/should have multiple chloroplasts, mitochondria, and ribosomes
- Have students form the piece of yarn into a circle as the cell membrane.
- *If doing a plant cell*: Have student place hula hoop on floor. Explain that this is the cell wall. Notice how strong, rigid, and hard it is. It helps keep the shape of the cell and keeps all the parts inside.
- Have student fit the yellow felt inside the hula hoop. Explain that this is the cytoplasm and makes a nice cushion for all the parts inside the cell. It is like a big pillow.
- Have student place pink ball in the center of felt. Explain that this is the nucleus of the cell. It is like the brain, and tells all the other parts in the cell what to do. Every cell has a nucleus.

There are hands-on activities.



Cells

		 cell	
	 nucleus		 ribosome
 nucleus			
	 cell		 mitochondria

Place the following images in the empty squares on the previous page, completing the sudoku puzzle.

 cell	 cell	 nucleus	 nucleus
 ribosome	 ribosome	 mitochondria	 mitochondria
 ribosome	 mitochondria		

There are vocabulary puzzles.

Levels of Organization

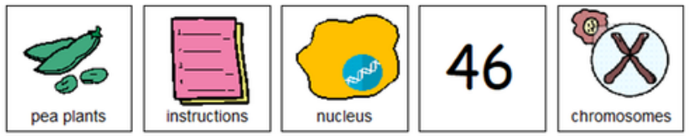
O V N E Z U P B N Q J G Z X A
R E E Z U W C Z X V G O I B A
G T P R F O R G A N I U O N Z
A P G I N V O L U N T A R Y C
N D Z H G L T K B S Q R H Q P
S I I I L L H B L N P B N Y H
Y C L V I F S A Q U R A U M S
S Z X R W Q B M N E T X X K S
T N V X B O T S U A W M C A V
E R M Y R D E F S A M F Z F N
M H O M E O S T A S I S Q V W
J B V R S P R C X P C E L L Q
P G Z S X O R G A N I S M B P
B M R J A Y N X S X G I L G M
C L N L Y A T I S S U E H Y H

organ system
involuntary
homeostasis
organism
tissue
organ
cell

All units include fill-in-the-blank worksheets to review concepts covered in the book and unit. Answer keys included.

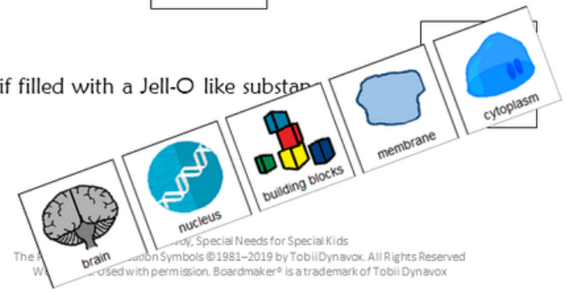
Genes

1. The instructions for the cell are found in the [ ] .
2. Genes carry the [ ] for the cell.
3. Genes are made of DNA which consist of [ ] .
4. Every person has [ ] chromosomes.
5. Gregor Mendel, the father of genetics, worked with [ ] .



Cells

1. Cells are the [ ] of all living things.
2. All cells are surrounded by a [ ] that protects it.
3. Most cells are eukaryotic and have a [ ] .
4. The nucleus is like the [ ] of the cell.
5. The cell if filled with a Jell-O like substa



Levels of Organization

1. Cells that are similar, group together to form [ ] .
2. Muscle cells would group together to form [ ] tissue.
3. Tissues that are similar, group together to form [ ] .
4. Nervous tissues would group together to form the [ ] .
5. Organs that are similar, group together to form [ ] .

Version 1

1. All plant and animal cells are surrounded by a:

2. A cell wall is an extra outer layer found only in:

3. The brain of the cell is the:

4. Which cells do NOT have a nucleus?

5. What are cells filled with that protect what is insi

Version 3

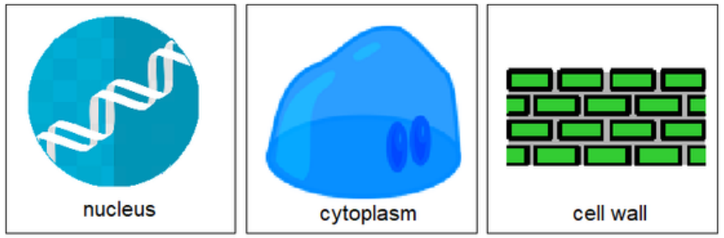
1. All plant and animal cells are surrounded by a:
   A. yarn
   B. membrane
   C. fence
2. A cell wall is an extra outer layer found only in:
   A. animals
   B. plants
   C. octopus
3. The brain of the cell is the:

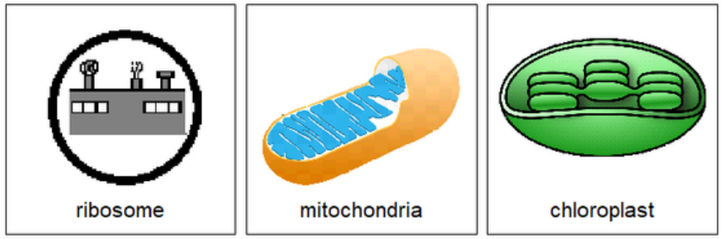
Version 2

Print onto cardstock or mount on index cards. Cut pictures apart and show student answer choices for each question.

Q 5

Q 6





NOT have a nucleus?

illed with that protect what is inside?
ws
ly

ings that are considered organelles.
D. ribosome
E. mitochondria
F. chloroplast

Finally, each unit has an assessment that is available in 3 versions. These are given 1:1 and read aloud to the student.

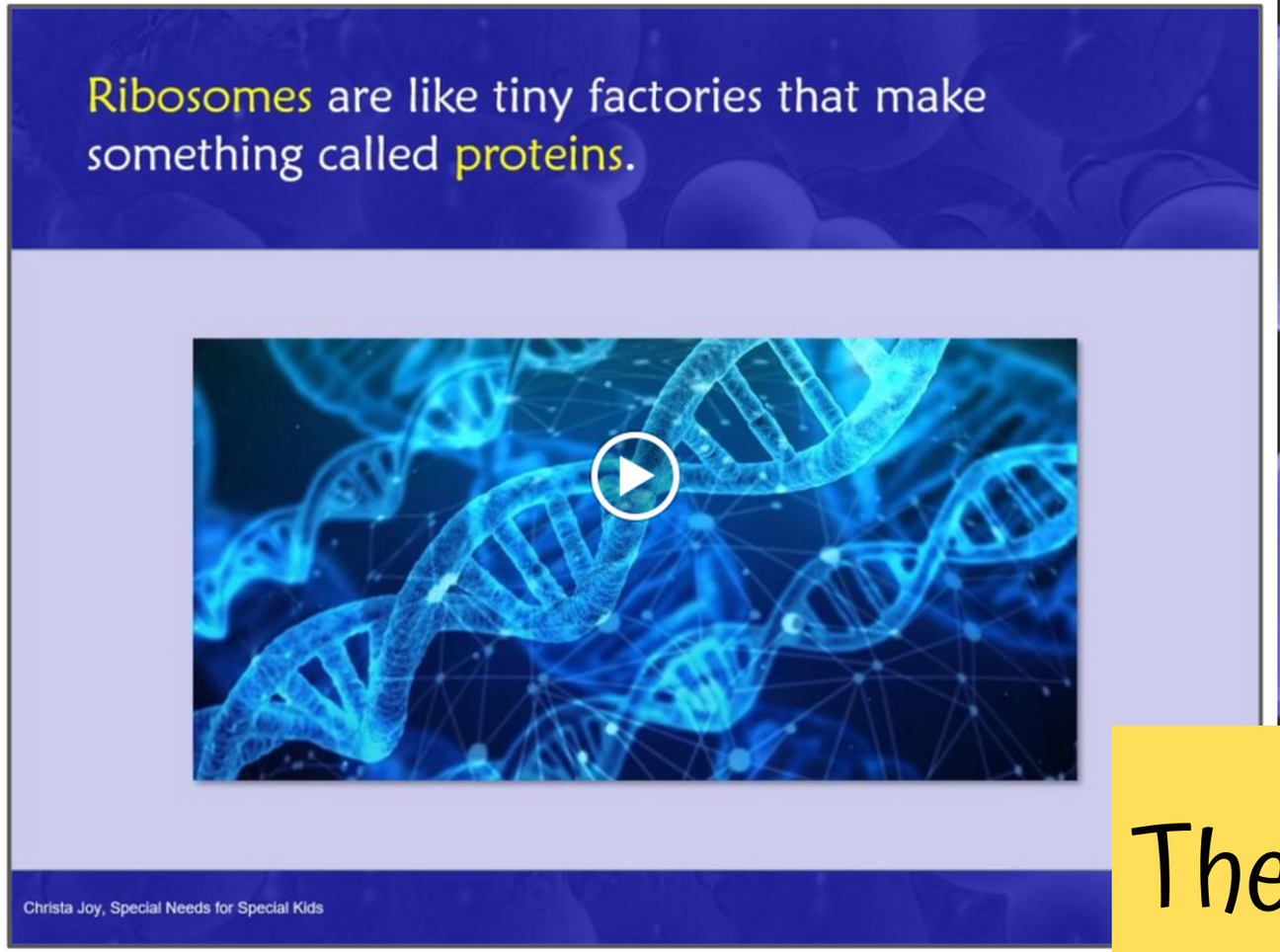
All of these units include digital versions of the activities. These simply require the student to click and drag the answers. There is no drawing or typing involved.

There is a movie version of the book.

There are 2 complete sets of slides. One set is differentiated with color.

Quickly combine slides from the 2 sets to create the perfect combination for each student.

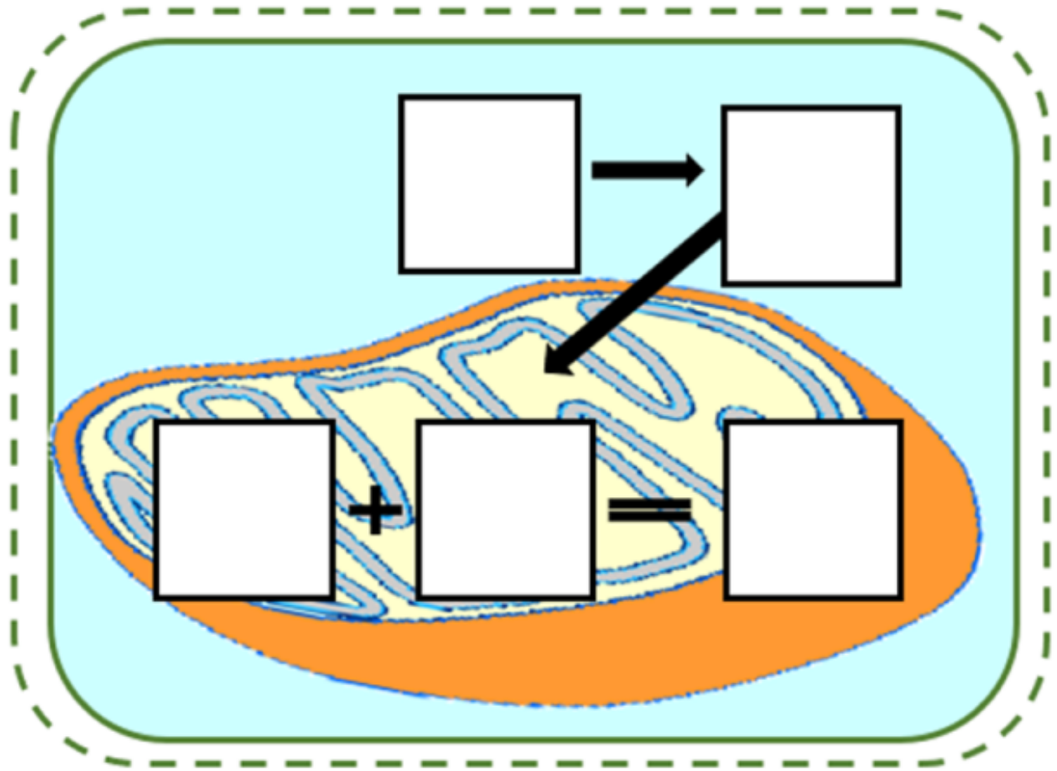
Watch the movie on Cells and Cell Processes



The movie version of the book from the unit.

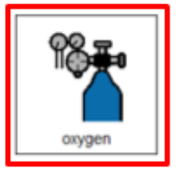
Great for review

The digital activities are click and drag.

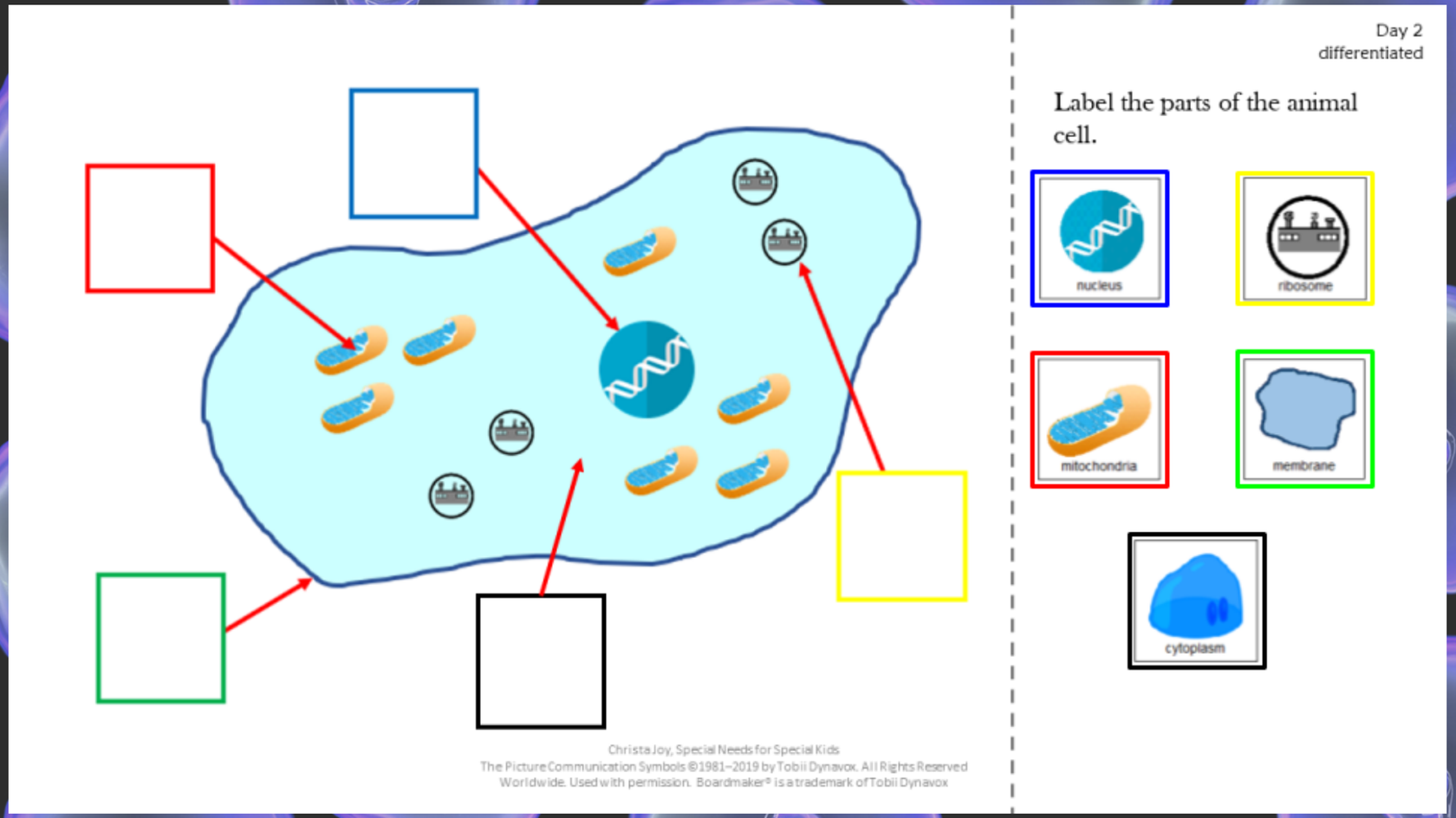


Day 4

Create cellular respiration inside the mitochondria of a plant cell.



Perfect for any learning level



Each unit comes with a set of slides that are differentiated with color.