

# MUSCULAR SYSTEM



ALSO INCLUDES GOOGLE SLIDES



This unit was created with this guy in mind. He has autism and an intellectual disability. He is a non-reader, has a very short attention span, and struggles to sit still. With some support he is able to do this unit, and enjoys the challenge. He is my tester!!

# Muscular System Unit for Special Education

By  
Christa Joy  
Special Needs for Special Kids



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### Also included in this resource as separate files:

- Lesson plans
- Links and directions to digital activities
- PowerPoints **(these are the books in the lesson plans)**
- Voice recorded PowerPoint
- Activities in black and white

This unit contains over **150 pages** of material plus **42 google slides**. I have included a detailed lesson plan to help you make the most of everything in this unit including how to add some group activities.

It comes in 2 separate files. One in color and one in black and white.

# Muscular System 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

1. *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/>
2. *Make you own copies of the activities:* Every day I review the activity we did yesterday. For that reason:
  - a. I often complete the activity myself and often laminated it for easy review that I could use year after year.
  - b. My copies were also helpful as either a model for students who needed more support or as a way for more advanced students to self-check their work.

The lesson plans contain:

Overall tips for teaching  
students with significant  
needs

## Quick Look

Day	Activity	Day	Activity
1	<ul style="list-style-type: none"><li>• Book</li><li>• Vocab cards introduction</li><li>• Circle map</li></ul>	8	<ul style="list-style-type: none"><li>• Book</li><li>• Vocab cards activity</li><li>• Matching activity</li></ul>
2	<ul style="list-style-type: none"><li>• Book</li><li>• Vocab cards activity</li><li>• Circle map</li></ul>	8	<ul style="list-style-type: none"><li>• Book</li><li>• Vocab cards activity</li><li>• Matching activity</li></ul>
3	<ul style="list-style-type: none"><li>• Book</li><li>• Vocab cards activity</li><li>• Circle map</li></ul>	9	<ul style="list-style-type: none"><li>• Book</li><li>• Vocab cards cut and paste</li><li>• Vocabulary puzzle</li></ul>
4	<ul style="list-style-type: none"><li>• Book</li><li>• Vocab cards activity</li><li>• Circle map</li></ul>	10	<ul style="list-style-type: none"><li>• Book</li><li>• Vocab cards cut and paste</li><li>• Vocabulary puzzle</li></ul>
5	<ul style="list-style-type: none"><li>• Book</li><li>• Vocab cards activity</li><li>• Circle map</li></ul>	11	<ul style="list-style-type: none"><li>• Book</li><li>• Vocab cards activity</li><li>• Close worksheet</li></ul>
6	<ul style="list-style-type: none"><li>• Book</li><li>• Vocab cards activity</li><li>• Circle map</li></ul>	12	<ul style="list-style-type: none"><li>• Book</li><li>• Vocab cards activity</li><li>• Close worksheet</li></ul>
7	<ul style="list-style-type: none"><li>• Book</li><li>• Vocab cards activity</li><li>• Matching activity</li></ul>	14	<ul style="list-style-type: none"><li>• Assessment</li><li>• Social Story</li></ul>

*The lesson plans contain:*

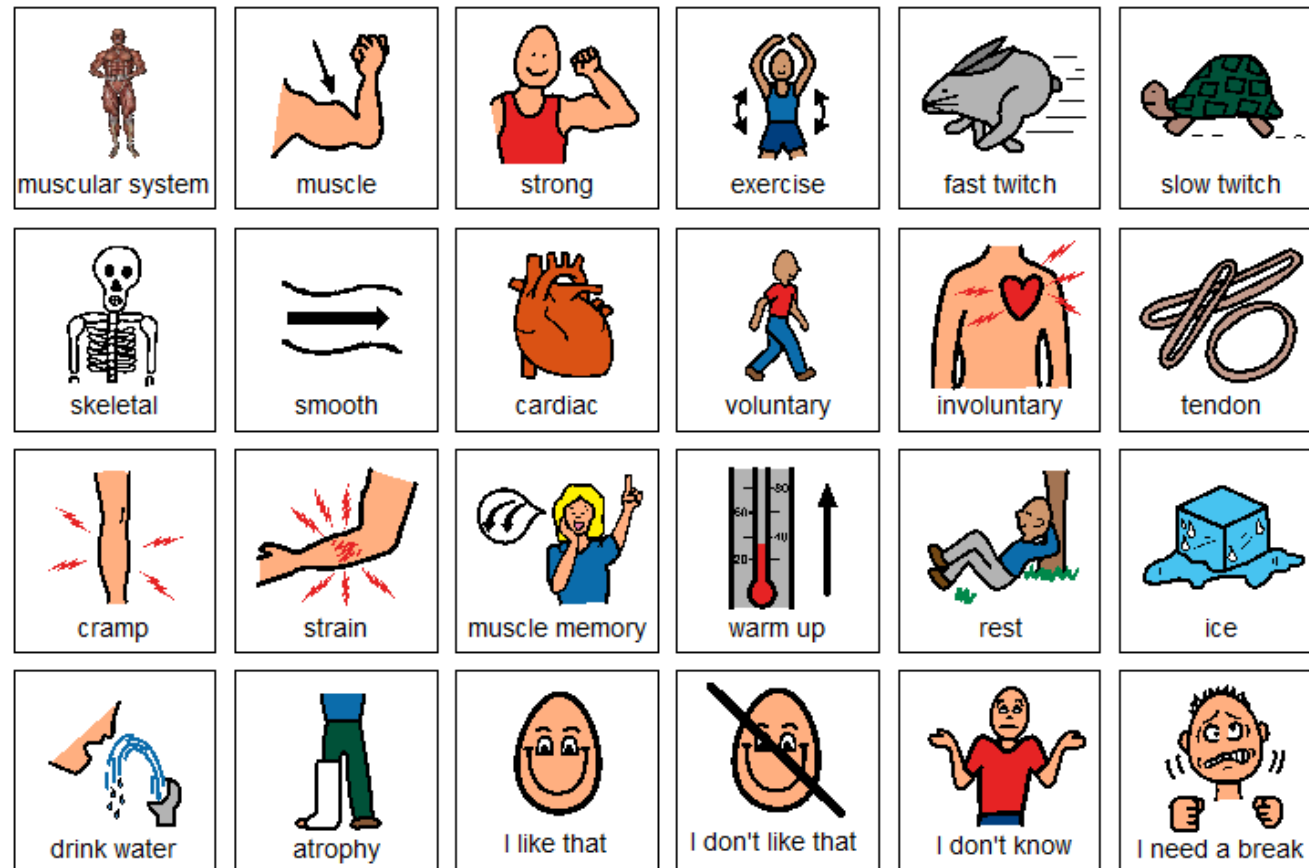
*A quick look at what you will do each day*

## Day 4

Activity	Notes	Materials
Read or listen to a recording of the book (15 minutes)	<ul style="list-style-type: none"><li>• Read through the story, asking lots of questions</li><li>• Continue to make connections between book and vocabulary board</li></ul>	<ul style="list-style-type: none"><li>• Book</li><li>• Vocabulary board</li></ul>
Vocabulary cards <b>Bean Bag Toss</b> (10 minutes)	<ul style="list-style-type: none"><li>• Glue the cut apart symbols to the paper plates (one on each plate)</li><li>• Arrange them around the room</li><li>• Students toss the bean bag trying to get it to land on a paper plate<ul style="list-style-type: none"><li>◦ Students retrieve the paper plate and share the vocabulary card they retrieved</li></ul></li></ul>	<ul style="list-style-type: none"><li>• Vocabulary cards</li><li>• Vocabulary cards cut apart</li><li>• Small paper plates (you can also use pieces of construction paper)</li><li>• Bean bags</li></ul>
Circle map review (5 minutes)	<ul style="list-style-type: none"><li>• Review the circle map completed yesterday</li></ul>	<ul style="list-style-type: none"><li>• Circle map completed yesterday</li></ul>
Circle Map (10 minutes)	<ul style="list-style-type: none"><li>• Do the circle map on <b>slow twitch</b> muscles</li><li>• Choose the best version (errorless or not) depending on the learning level of your students</li><li>• Students cut out symbols and place in circle map</li><li>• Make connections to the book as necessary</li></ul>	<ul style="list-style-type: none"><li>• Circle map</li><li>• Scissors</li><li>• Glue</li></ul>
Sharing (10 minutes)	<ul style="list-style-type: none"><li>• Each student shares their circle map with the group using the communication method of their choice</li></ul>	<ul style="list-style-type: none"><li>• Completed circle maps</li><li>• Communication devices</li></ul>

The lesson plans contain:

Detailed instructions on how that day's lesson should run



This unit comes with a vocabulary board.

Vocabulary boards are great for ALL students to assist with participation and engagement in group discussions.

Tips on how to use in the unit!!

**Involuntary** muscles are those that you don't even think about and cannot control. Your heart is the most important involuntary muscle in your body. It beats constantly without you ever thinking about it.



©Christa Joy, SNSK

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Muscles are attached to bones with a strong band called a **tendon**. When the tendon contracts, it causes your arm or leg to bend.



©Christa Joy, SNSK

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There is a 39-page book with simple text and engaging photos.

It comes in a PowerPoint version as well as a voice-recorded PowerPoint (so you don't have to print it out.)

There is also a movie version you can use in google slides.



Exercise is an important thing to do to stay strong and healthy.



©Christa Joy, SNSK

Before you start to exercise, you should stretch.



You should also stretch when you are done.

©Christa Joy, SNSK

There is a 19-page social story with simple text and engaging photos about what to do if you feel sick.

It comes in a PowerPoint version as well as a voice-recorded PowerPoint (so you don't have to print it out.)

There is also a movie version you can use in google slides.

### cardiac muscle

Muscles found in the heart.



### Slow twitch

Type I muscle fibers that carry a lot of oxygen and are important for endurance, like a long hike.



### Fast twitch

Type II muscle fibers that have less oxygen and are important for strong, quick movements like a sprint or lifting weights.



### tendon

Strong cord or band that connects a muscle to a bone.



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### muscular system

All the muscles in your body that help you move and keep your body working.



### muscles

Tissues composed of bundles of cells and fibers, that contract and cause part of the body to move.



### skeletal muscles

Muscles that are responsible for moving most of your body parts.



### smooth muscles

Muscles that are found in and around organs that keep foods and liquids moving through your body.



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There are 14 vocabulary cards that come in color and black and white.

Included are suggestions for group activities to do with these each day.

### muscular system

All the muscles in your body that help you move and keep your body working.



### muscles

Tissues composed of bundles of cells or fibers, that contract and cause part of the body to move.



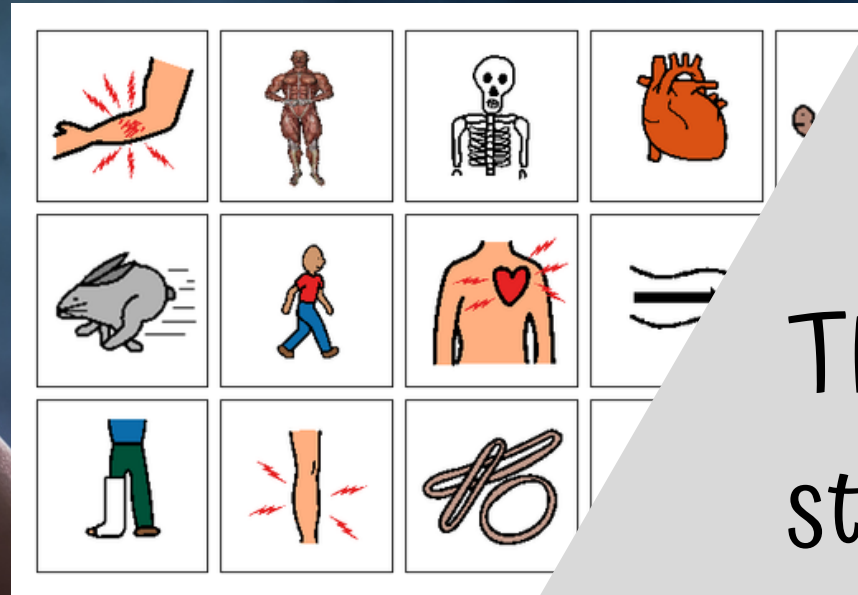
### skeletal muscles

Muscles that are responsible for moving most of your body parts.



### smooth muscles

Muscles that are found in and around organs that keep foods and liquids moving through your body.



There is an activity where students will match either the picture to the definition or the definition to the picture (harder).

### cardiac muscle



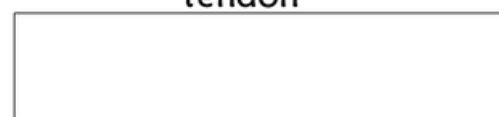
### Slow twitch



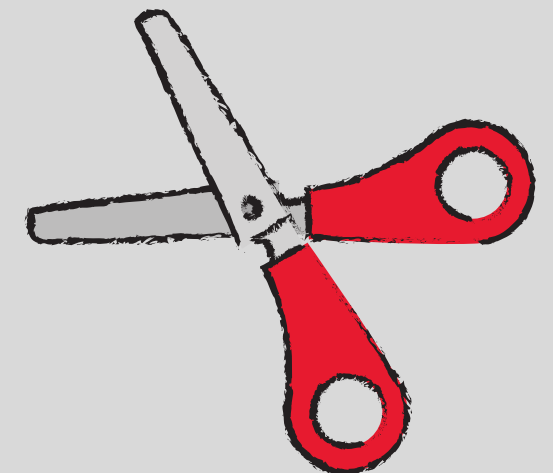
### Fast twitch



### tendon












Type II muscle fibers that have less oxygen and are important for strong, quick movements like a sprint or weight lifting.	When a muscle contracts and does not relax. It is painful.
When a muscle gets torn or bruised, usually from overdoing it.	Strong cord of tissue that connects muscle to bone.
All the muscles in your body that help you move and keep your body working.	Muscles you can control when you think about a step.
Muscles that are responsible for moving most of your body parts.	Tissues composed of bundles of fibers, that contract and cause the body to move.
Muscles that work without you needing to think about it, like your heart.	When a muscle contracts and does not relax. It is painful.
Muscles found in the heart.	Muscles that are found in and around organs that keep foods and liquids moving through your body.



### Slow Twitch Muscles



















Place the following in the circle map on previous page.

 marathon	 walkathon	 hike	 ride a bike	 dig
 carry books	Type I	 build	 work a long time	 climb



### Slow Twitch Muscles

Place the following in the circle map on previous page **ONLY IF** correct. Remember, when trying to decide if fast or slow twitch, slow twitch involve actions you could do for a long time.






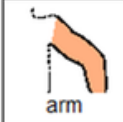


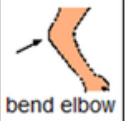

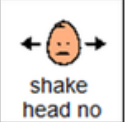
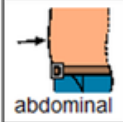
 sprint	 marathon	 chase	 hike	 walkathon
 lift	 ride a bike	 powerful	Type I	 catch
 work a long time	 jump	 build	 dig	 weight lifter
Type II	 skate	 climb	 get tired quickly	 carry books

There are 6 circle maps reviewing the different types of muscles.

Circle maps are a great way for students to see the concept at a glance. There are 2 versions:

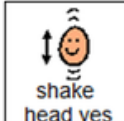

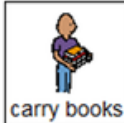

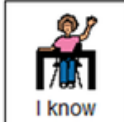






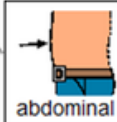
- One is errorless
- One has wrong answers mixed in students will have to set aside

Draw a line from the action to the **PRIMARY** group of muscles responsible for that action.

 wave	 neck
 type	 shoulder
 walk	 arm
 stand tall	 leg
 bend elbow	 hands
 shake head no	 abdominal


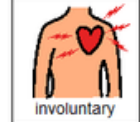









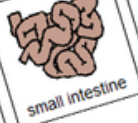





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Trace a line from the action to the **PRIMARY** group of muscles responsible for that action.

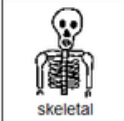
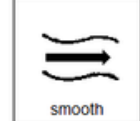








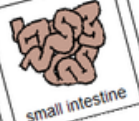
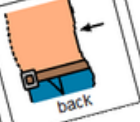




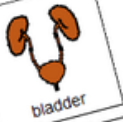
 shake head yes	 neck
 carry books	 shoulder
 I know	 arm
 deep breaths	 leg
 knit	 hands
 run	 abdominal

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There are 2 activities where students match the function of each muscle. There is a differentiated version with lines for students to trace.

 voluntary		 involuntary	
 arm	 stomach	 heart	 leg
 jaw	 shoulder	 neck	 large intestine
 hands	 small intestine	 pupil	 feet
			 bladder
			 lungs
			 abdominal





















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 skeletal	 smooth	 cardiac
 arm	 stomach	 heart
 jaw	 shoulder	 neck
 hands	 small intestine	 back
		 leg
		 large intestine
		 face
		 feet
		 bladder








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There are 3 sorting activities where students can compare different types of muscles. Suggestions for differentiation are included.

# Muscular System

	 skeletal		 cramp		 smooth
 muscles		 smooth	 tendon	 skeletal	
 smooth	 cardiac	 skeletal			 tendon
		 tendon	 smooth	 cardiac	 skeletal
 cardiac		 cramp		 tendon	 muscles
			 cardiac		

# Muscular System

			 muscles
		 tendon	 atrophy
 muscles			 cramp
 atrophy	 cramp		

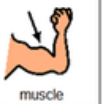



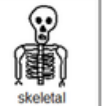

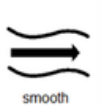
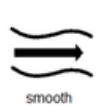
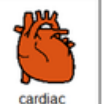
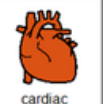






There is a Sudoku puzzle in this unit as well. This is a great way to work with the new vocabulary!!

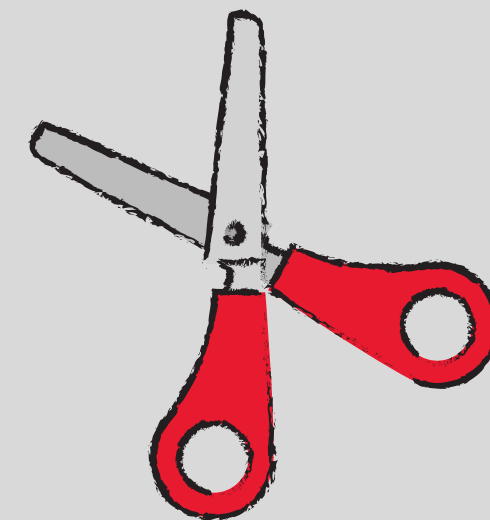
There are 2 versions plus answer keys.

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

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 muscle	 muscle	 muscle	 muscle
 skeletal	 skeletal	 smooth	 smooth
 cardiac	 cardiac	 tendon	 tendon
 cramp	 cramp	 cramp	 cramp



# Muscular System

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

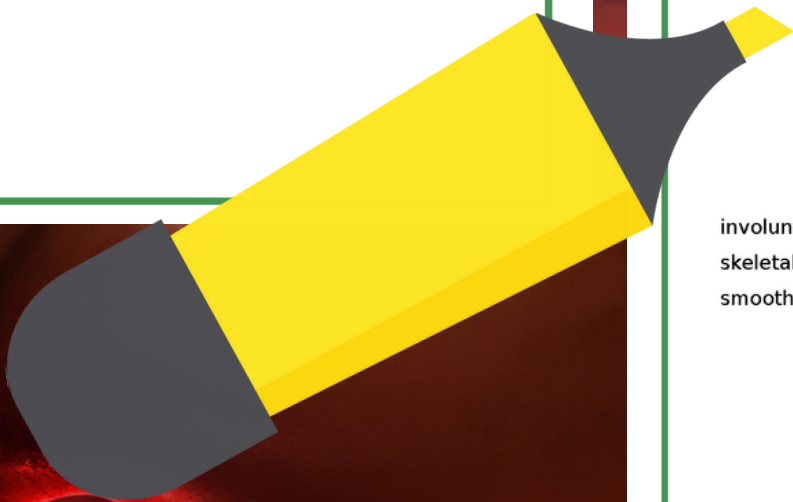
- |             |             |           |             |
|-------------|-------------|-----------|-------------|
| involuntary | slow twitch | voluntary | fast twitch |
| skeletal    | atrophy     | cardiac   | muscle      |
| smooth      | tendon      | sprain    | cramp       |

# Muscular System

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

- |             |             |           |          |
|-------------|-------------|-----------|----------|
| involuntary | slow twitch | voluntary | fast tw. |
| skeletal    | atrophy     | cardiac   | muscle   |
| smooth      | tendon      | sprain    | cramp    |

There is also a word search to work with vocabulary. If your students cannot do a word search, have them highlight the circle words on the answer key.





# Muscular System

1. There are over  muscles in your body.
2. When you raise your hand in class, you use your  muscles.
3. When you get a cramp you should .
4.  run through the muscles, carrying oxygen.
5. When you smile, you use  muscles.

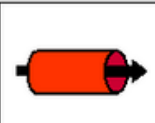








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# Muscular System

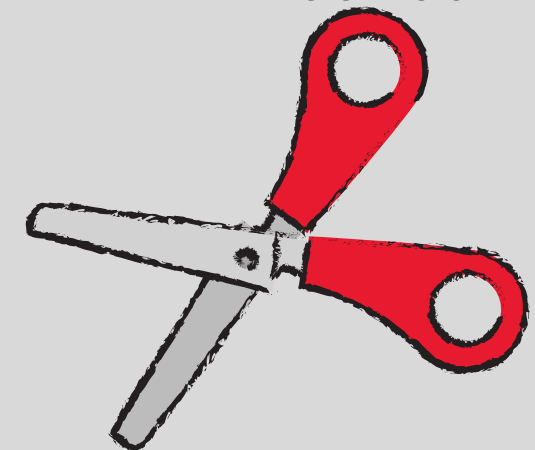
6. When you sprint across the playgroup, you use  muscles.
7. When your leg is in a cast, the muscles can .
8. The strongest muscle in your body is in your .
9. The smallest muscle in your body is in your .
10. When you cold, you  to help get warm.

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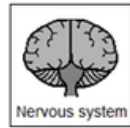
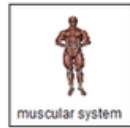
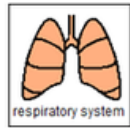
Use either pictures or words to complete the sentences on the previous page.

Page 1	 blood vessels	 shoulder	650	 voluntary	 drink water
Page 2	 jaw	 atrophy	 ear	 fast twitch	 shiver

There are 2 fill-in-the-blank worksheets. These allow you to review and focus on facts from the book and identify areas for review prior to the assessment.



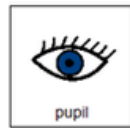
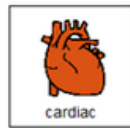
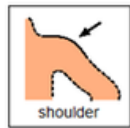
1. What is the name of system that allows you to walk and keeps your hear beating?



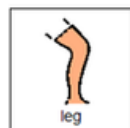
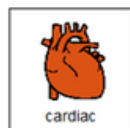
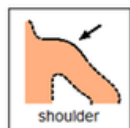
2. About how many muscles are in the human body?



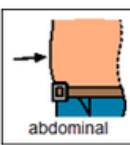
3. An example of a voluntary muscle would be:



4. An example of an involuntary muscle would be:



5. When you stand up tall and take a deep breath, you are mainly using which muscles?



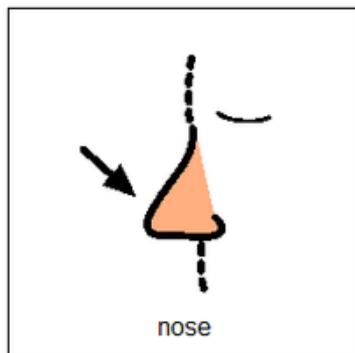
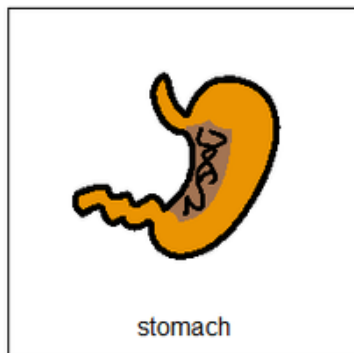
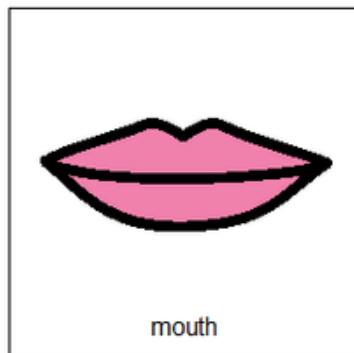
There is a 10 question assessment.

There are 3 versions. This version has 10 questions with 3 picture choices for each question.

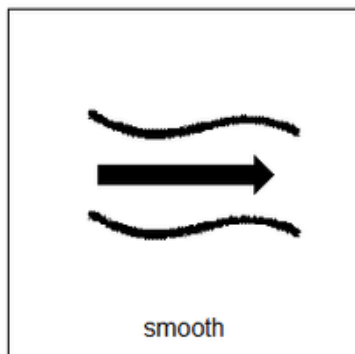
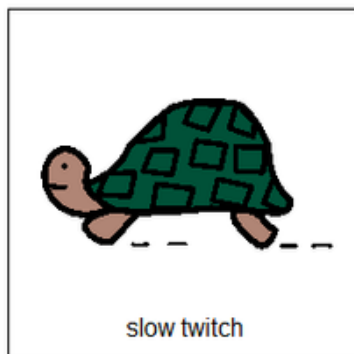
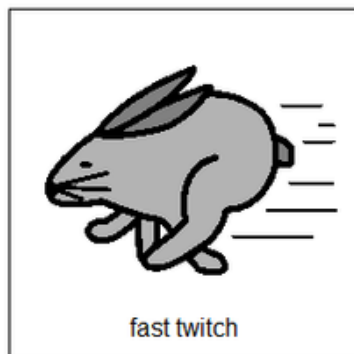
Answer key included.

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

Q 7



Q 8



With this version, you cut out the answer choices and glue them on index cards. Ask the student the question, and they point to the correct answer.

1. What is the name of system that allows you to walk and keeps your heart beating?
  - A. Respiratory system
  - B. Muscular system
  - C. Nervous system
2. About how many muscles are in the human body?
  - A. 50
  - B. 1000
  - C. 650
3. An example of a voluntary muscle would be:
  - A. Shoulder
  - B. Cardiac
  - C. Pupil
4. An example of an involuntary muscle would be:
  - A. Shoulder
  - B. Cardiac
  - C. Leg
5. When you stand up tall and take a deep breath, you are mainly using which muscles?
  - A. Abdominal
  - B. Neck
  - C. Smooth
6. What type of muscles keep your heart beating?
  - A. Skeletal
  - B. Cardiac
  - C. Smooth

*This is your traditional multiple choice version. It can also be used as a recording sheet if your students are using the version with index cards.*

Watch the movie on the Muscular System

The blood vessels carries oxygen to our muscles that gives them the energy they need to move.



Christa Joy, Special Needs for Special Kids

6

*This unit also includes digital versions of the activities.*

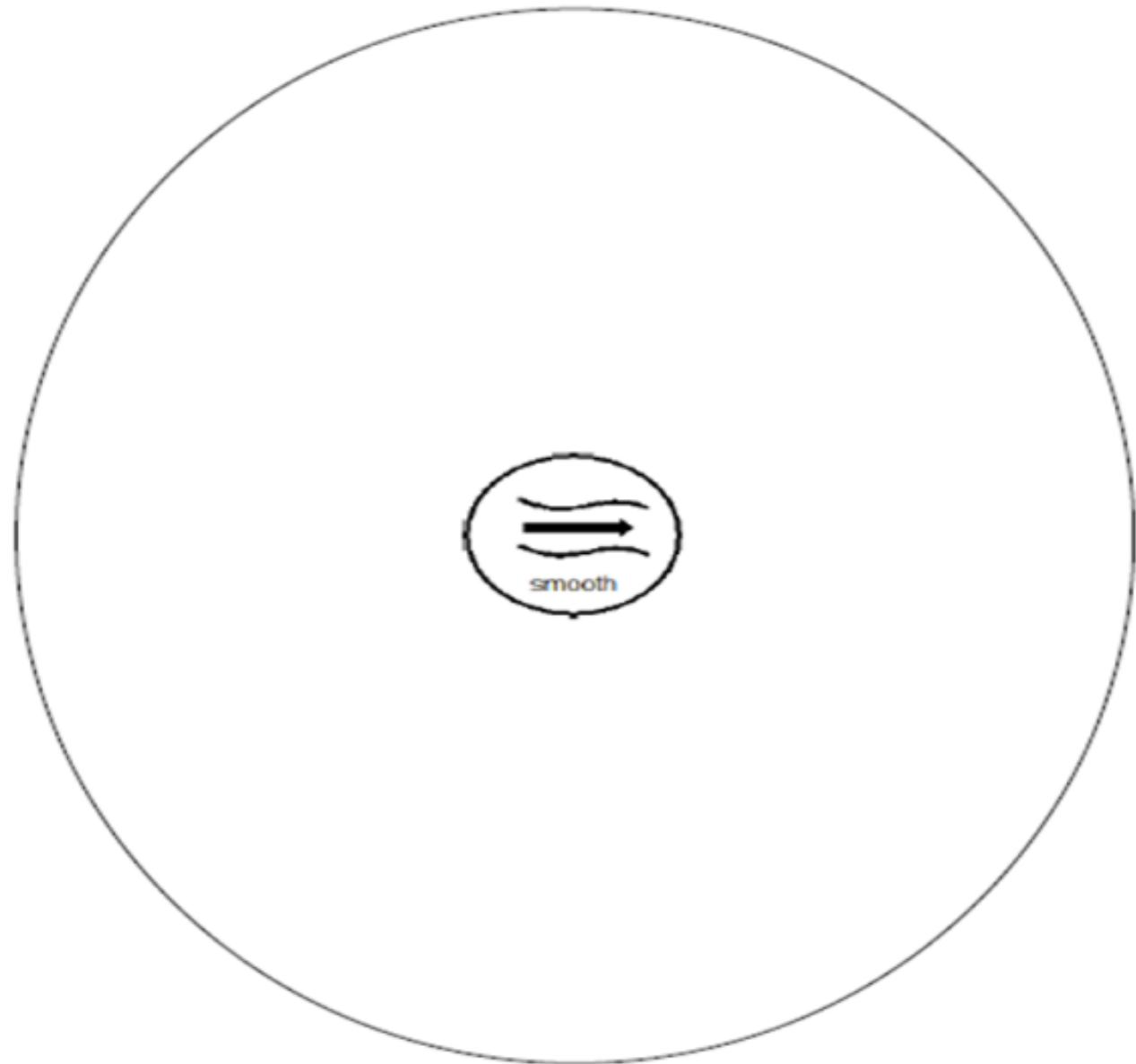
*Students can watch a movie book version of the book rather than printing it out.*

Watch the movie on Avoiding Injury

If you exercise on a regular basis, use the right equipment, stretch, and drink plenty of water, you are less likely to get an injury.



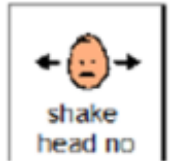
Christa Joy, Special Needs for Special Kids  
The Picture Communication Symbols ©1983–2018 by Tobii Dynavox. All Rights Reserved  
Worldwide. Used with permission. Boardmaker® is a trademark of Tobii Dynavox



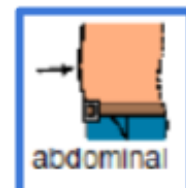
Place the pictures in the circle map **ONLY IF** they relate to the smooth muscles.

 shoulder	 stomach	 lungs	 abdominal wall
 hands	 feet	 heart	 eye
 face	 large intestine	 arm	 blood vessel
 small intestine	 pupil	 elbow	 blood vessel
 leg	 back	 knee	 neck

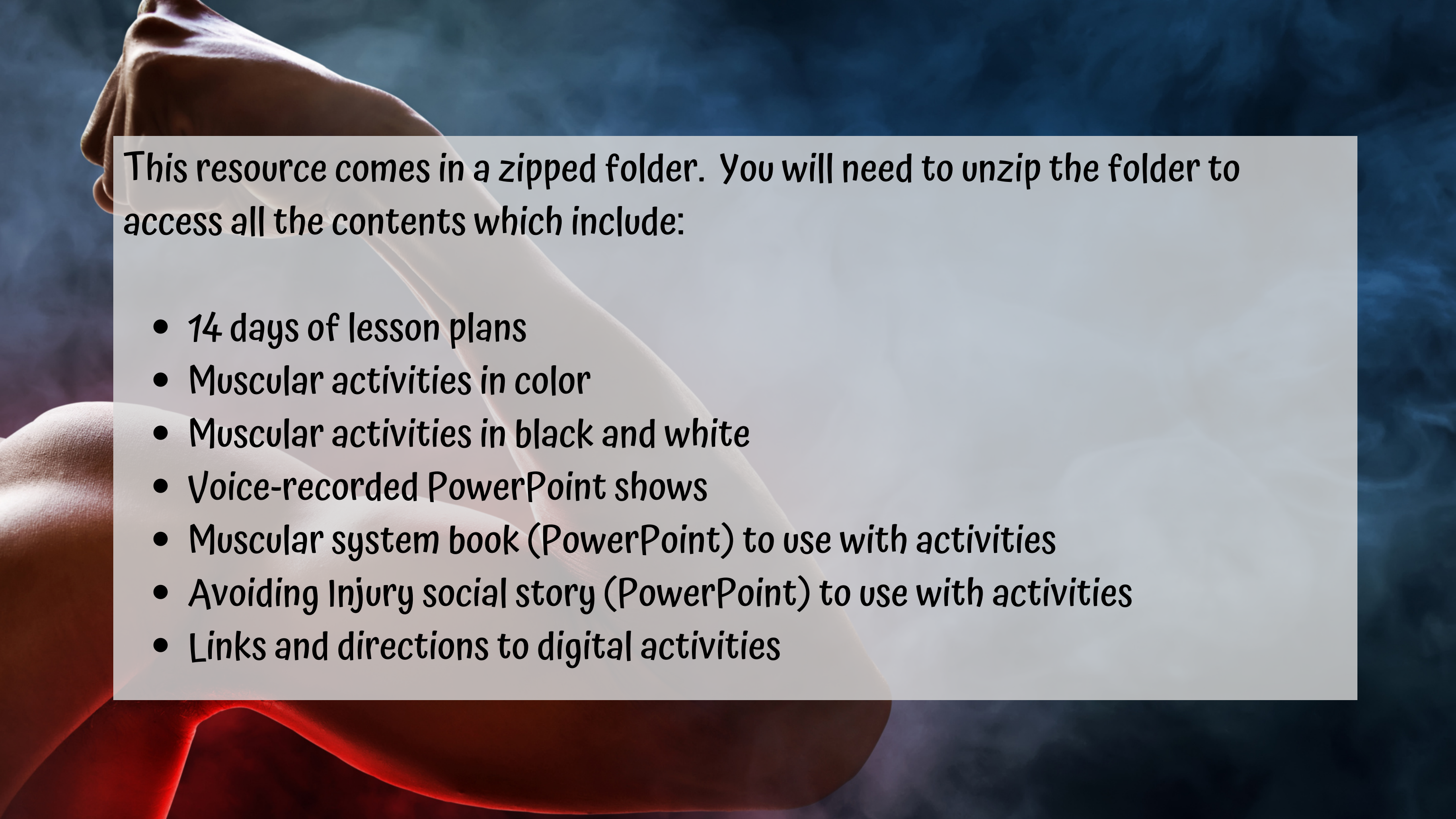
Each activity is set up so students can click and drag answers. No typing is required.



Match the action to the primary group of muscles responsible for that action.



The second set of slides uses color for differentiation and extra support for students who may need it. Mix and match slides from both sets to make the perfect set for each student.

A hand is shown holding a white folder. The background features a close-up of a human arm with glowing red muscles, set against a dark blue, textured background.

***This resource comes in a zipped folder. You will need to unzip the folder to access all the contents which include:***

- ***14 days of lesson plans***
- ***Muscular activities in color***
- ***Muscular activities in black and white***
- ***Voice-recorded PowerPoint shows***
- ***Muscular system book (PowerPoint) to use with activities***
- ***Avoiding Injury social story (PowerPoint) to use with activities***
- ***Links and directions to digital activities***