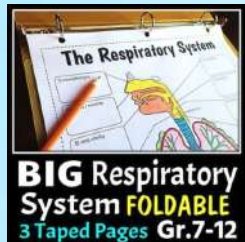


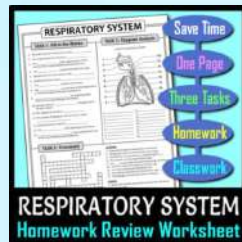
OTHER RESPIRATORY SYSTEM RESOURCES by Tangstar Science

These **6 RESOURCES** can be purchased individually or in the two bundles below.

Teaching
the Topic



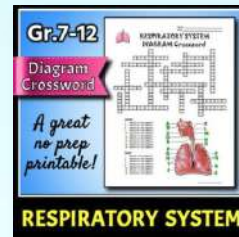
Homework,
Review, Test Prep



Article,
Science Literacy



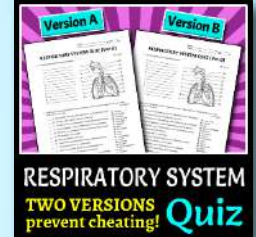
Early Finishers,
Extra Practice



Fun Group
Review Game



Quick
Assessment



RESPIRATORY SYSTEM BUNDLE
for **25% OFF.**



ANATOMY MEGA BUNDLE
for **40% OFF.**

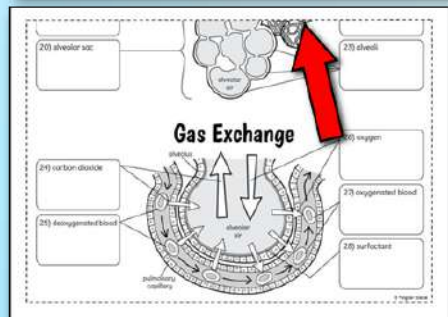
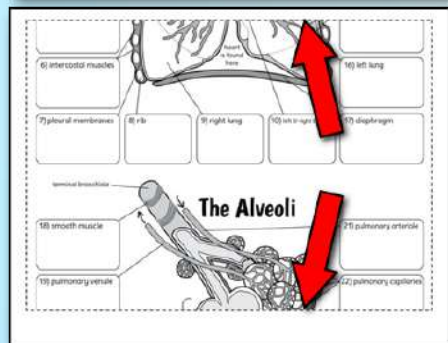
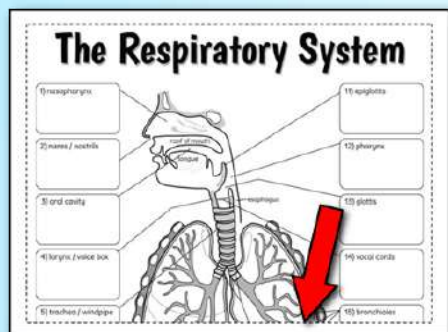


OTHER RESPIRATORY SYSTEM RESOURCES by Tangstar Science

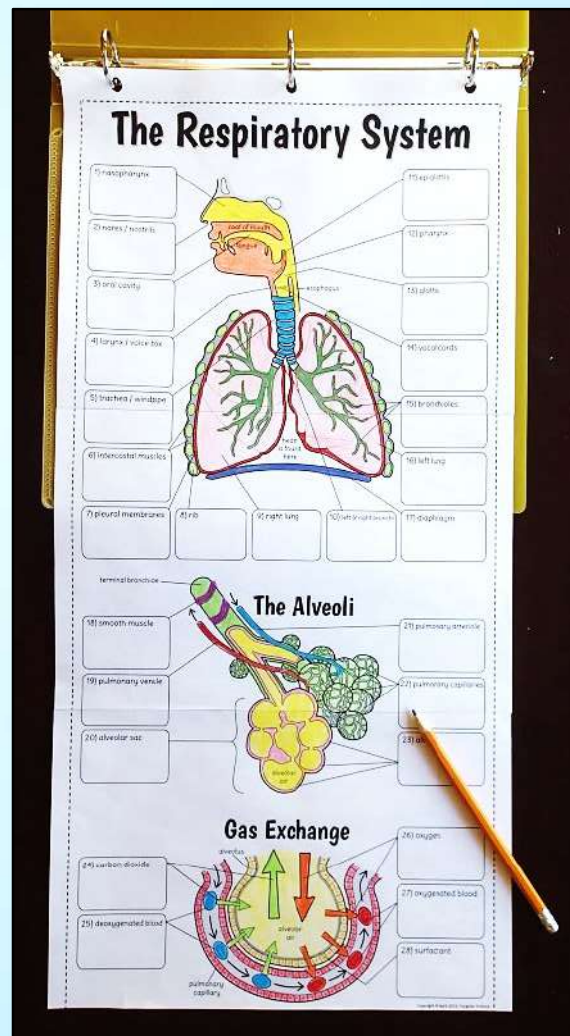
RESOURCE 1: TEACHING THE TOPIC - Big Respiratory System Foldable

3 pages **cut out** and **taped** together.

Put in a **Binder**. OR Put in an **INB**.



then...

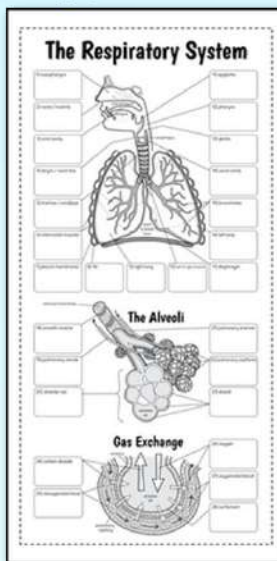


Omit either of these topics (The Alveoli & Gas Exchange) if you are not teaching them.

RESOURCE 1: TEACHING THE TOPIC - Big Respiratory System Foldable

There are many
foldable options
for differentiation and
full answer keys are
provided for all options.

Image, Boxes & Labels



Image, Boxes & Underlines

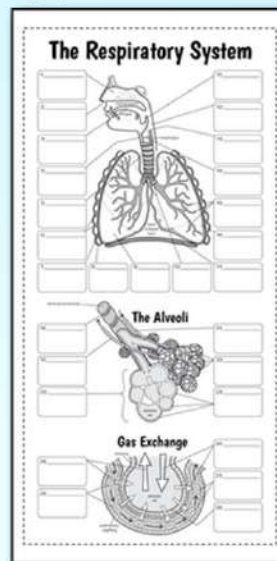


Image & Boxes

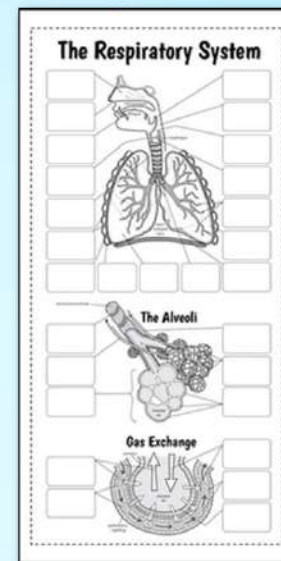


Image & Numbers

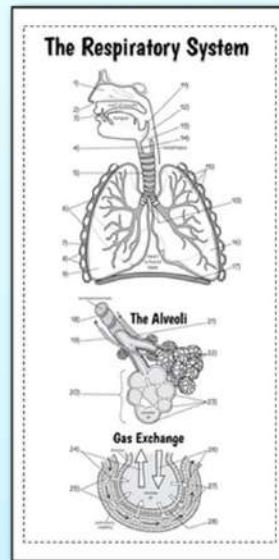
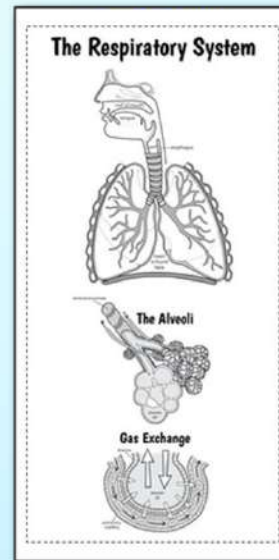


Image Only



RESOURCE 2: INDIVIDUAL REVIEW - Respiratory System Review Worksheet / Test Prep

RESPIRATORY SYSTEM

TASK 1: Fill in the Blanks

- The main muscle of respiration is the _____.
- The singular term for bronchi is _____.
- The _____ is the upper portion of the trachea that is responsible for sound production.
- The _____ protect the heart and lungs.
- Another term for the trachea is the _____.
- Another term for lung is _____.
- The _____ lung has three lobes.
- The _____ is at the back of the throat and is a shared passageway for both food and air.
- _____ are small branched tubes of the lungs leading to the alveoli.
- During inhalation, _____ is the gas we're trying to obtain.
- The singular for alveoli is _____.
- The process of taking air into the body is called _____.
- Another term for nostrils is _____.
- The _____ is the opening to the trachea.
- _____ is the scientific term for breathing (inhalation and exhalation).

TASK 2: Diagram Analysis

Label the respiratory system.

- 1 _____
- 2 _____
- 3 _____
- 4 _____
- 5 _____
- 6 _____
- 7 _____
- 8 _____
- 9 _____
- 10 _____
- 11 _____
- 12 _____
- 13 _____
- 14 _____
- 15 _____
- 16 _____
- 17 _____
- 18 _____

TASK 3: Crossword

ACROSS

- Grape-like clusters of respiratory membrane.
- The gas you want to remove from your lungs.
- The trachea is supported by C-shaped rings of _____.
- The process of removing air from lungs.
- The _____ muscles help move the ribs during ventilation.
- The main tube that carries air to the lungs.
- Air entering these are filtered by hair.
- The trachea branches into the left and right _____.
- The passage connecting nostrils to pharynx.

DOWN

- Bands that stretch across the voice box and vibrate to create sounds.
- Another term for the larynx.
- The flap that closes over the opening to the trachea.
- The _____ lung has two lobes and a notch to help the heart fit underneath it.
- This passageway intakes larger quantities of air during exercise.

CONCEPTS

- Nostrils
- Nasopharynx
- Oral cavity
- Pharynx
- Epiglottis
- Glottis
- Larynx
- Voice box
- Trachea
- Windpipe
- Cartilage rings
- Vocal cords
- L. & R. Bronchus, Bronchi
- Bronchioles
- Alveoli, Alveolus
- L. & R. Lungs
- Pleural membranes
- Ribs
- Intercostal muscles
- Diaphragm
- Inhalation
- Exhalation
- Ventilation
- Oxygen
- Carbon dioxide
- Pulmonary

ANSWER KEY

RESPIRATORY SYSTEM ANSWER KEY

TASK 1: Fill in the Blanks

- The main muscle of respiration is the **DIAPHRAGM**.
- The singular term for bronchi is **BRONCHUS**.
- The **EPIGLOTTIS** is the upper portion of the trachea that is responsible for sound production.
- The **RIBS** protect the heart and lungs.
- Another term for the trachea is the **WINDPIPE**.
- Another term for lung is **PULMONARY**.
- The **RIGHT** lung has three lobes.
- The **ADAM'S APPLE** is at the back of the throat and is a shared passageway for both food and air.
- BRONCHIOLES** are small branched tubes of the lungs leading to the alveoli.
- During inhalation, **OXYGEN** is the gas we're trying to obtain.
- The singular for alveoli is **ALVEOLUS**.
- The process of taking air into the body is called **INHALATION**.
- Another term for nostrils is **NOSE**.
- The **GLOTTIS** is the opening to the trachea.
- PULMONARY** is the scientific term for breathing (inhalation and exhalation).

TASK 2: Diagram Analysis

Label the respiratory system.

- 1 **NOSTRIL**
- 2 **ORAL CAVITY**
- 3 **PHARYNX**
- 4 **EPIGLOTTIS**
- 5 **GLOTTIS**
- 6 **LARYNX**
- 7 **VOICE BOX**
- 8 **TRACHEA**
- 9 **WINDPIPE**
- 10 **CARTILAGE RINGS**
- 11 **VOCAL CORDS**
- 12 **L. & R. BRONCHUS, BRONCHI**
- 13 **BRONCHIOLES**
- 14 **ALVEOLI, ALVEOLUS**
- 15 **L. & R. LUNGS**
- 16 **PLEURAL MEMBRANES**
- 17 **RIBS**
- 18 **INTERCOSTAL MUSCLES**

TASK 3: Crossword

ACROSS

- ALVEOLI**
- CARBON DIOXIDE**
- RINGS**
- EXHALATION**
- DIAPHRAGM**
- TRACHEA**
- HAIR**
- BRONCHI**
- PHARYNX**

DOWN

- VOCAL CORDS**
- LARYNX**
- FLAP**
- RIGHT**
- EXERCISE**

3 TASKS

- Assign the whole page, or break it up into in class tasks, exit tickets and homework tasks.
- The variety of different tasks helps students review in different ways and holds their interest.

RESOURCE 3: EXTRA REINFORCEMENT - Respiratory System Diagram Crossword

FULLY EDITABLE WORD DOC INCLUDED

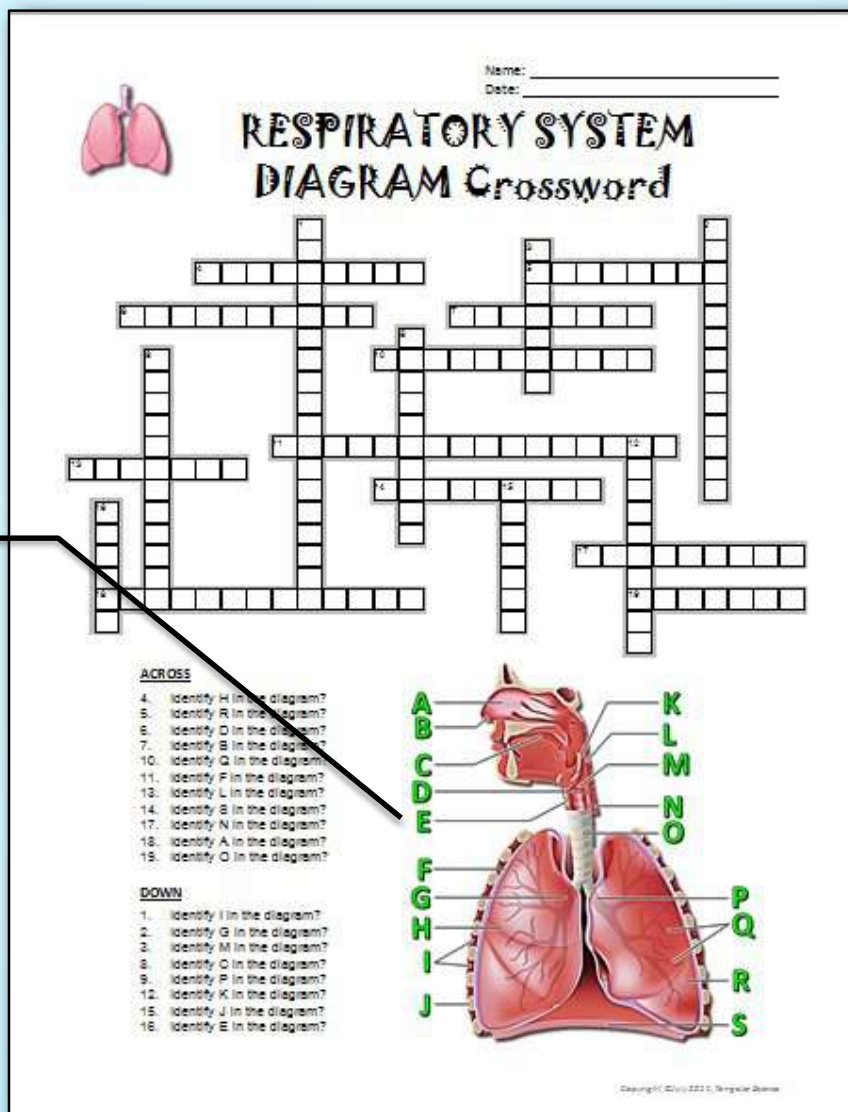
- Reword questions according to your classroom needs.

ONE PAGE

- For easy and economical printing.

CLEAR DIAGRAMS

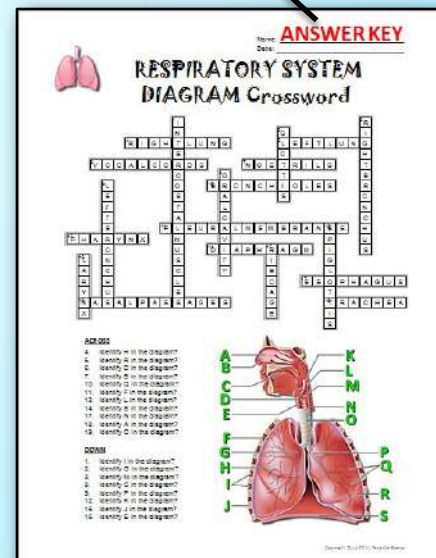
- Helps students practice labeling biological diagrams. Diagram crosswords are a fun twist on the usual labeling worksheet.
- **BONUS ACTIVITY:** After completing the crossword, have students cut out the diagram, paste it in their notes and then label the structures for extra reinforcement.



No Prep.
Just Print
and Use!

FULL ANSWER KEY

- Easy for you or your students to take up the answers.



RESOURCE 4: ARTICLE/SCIENCE LITERACY - "Breathing and Peeing in Space"

Zoom in to read.

BREATHING AND PEEING IN SPACE

17

astronomy ♦ technology ♦ chemistry

(1) Supporting human life inside of a spacecraft is challenging. A spacecraft is small and air and food need to be provided, waste needs to be removed and everything must stay clean. All of this is made more challenging due to the zero gravity or microgravity experienced within different spacecrafts.

(2) Earth's air is made up of mostly 78% nitrogen gas and 21% oxygen gas. In a space station, there isn't a lot of room to store a large amount of air. The oxygen is quickly used up by the astronauts if no further oxygen is supplied. The International Space Station (ISS) was put into orbit around the Earth in 1998 and was designed for long-term missions. The original oxygen on board has long disappeared. In space crafts, there needs to be ways to generate oxygen and three main methods are used: 1) pressurized oxygen air tanks, 2) oxygen generators using electrolysis and 3) solid fuel oxygen generators (SFOG).

(3) The pressurized oxygen air tanks on board the ISS are constantly resupplied with oxygen when supply ships arrive from Earth. These supply ships also pump nitrogen gas into other tanks. The space station's atmosphere control system mixes the two gases together to imitate the mixture of air found on Earth. It then circulates this air mixture through the spacecraft.

(4) Oxygen generators can also use the process of electrolysis to make oxygen. During electrolysis, water molecules are broken down into oxygen gas and hydrogen gas. See the



This water, along with the water reclaimed from the astronauts' urine, can be used for electrolysis. The electrolysis of water is the main way that oxygen is provided on a spacecraft.

(5) The solid fuel oxygen generator (SFOG) is the backup method for making oxygen in case of emergencies. SFOG contains two powders: sodium chlorate (NaClO_3) powder and iron (Fe) powder. A chemical reaction happens between these two powders to form water. Take a look at the equation for this reaction:



In addition to producing oxygen gas, salt (NaCl) and iron oxide (FeO) are also produced. Every kilogram of the SFOG powdered mixture can produce enough oxygen for 6.5 hours of breathing.

(6) Not only is oxygen strictly controlled on a spacecraft, so is waste production and waste storage. On Earth, water easily pours and

Science Literacy Warm Up

BREATHING AND PEEING IN SPACE



(1) Supporting human life inside of a spacecraft is challenging. A spacecraft is small and air and food need to be provided, waste needs to be removed and everything must stay clean. All of this is made more challenging due to the zero gravity or microgravity experienced within different spacecrafts.

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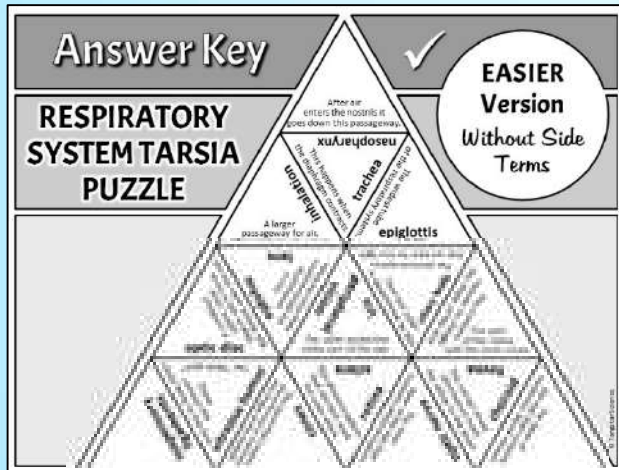
(8) Not only is oxygen strictly controlled on a spacecraft, so is waste production and waste storage. On Earth, water easily pours and

RESOURCE 5: FUN GROUP REVIEW - Respiratory System Tarsia Puzzle Game

2 LEVELS OF DIFFICULTY

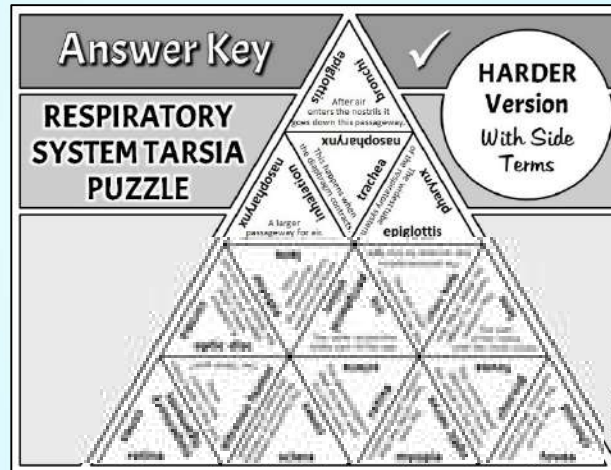
Easier

WITHOUT SIDE TERMS



Harder

WITH SIDE TERMS



TERMS

- Nostrils
- Nasopharynx
- Oral cavity
- Pharynx
- Epiglottis
- Glottis
- Larynx
- Trachea
- Vocal cords
- Bronchi
- Bronchioles
- Alveoli
- Lungs
- Ribs
- Intercostal muscles
- Diaphragm
- Inhalation
- Exhalation

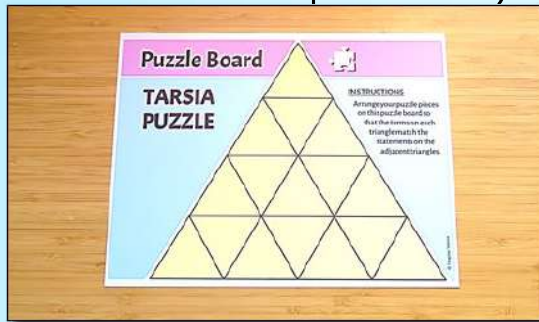
Without side terms it is easier to solve the puzzle because it gives students clues to create the border of the puzzle.

OTHER RESPIRATORY SYSTEM RESOURCES by Tangstar Science

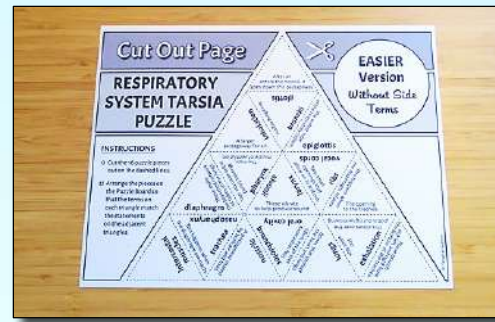
RESOURCE 5: FUN GROUP REVIEW - Respiratory System Tarsia Puzzle Game

STEP 1: Print out puzzle board and puzzle pieces sheet.

Board (black & white option provided as well)



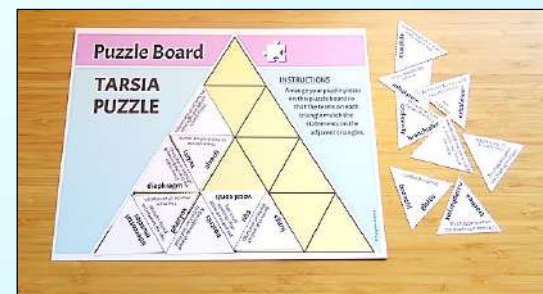
Puzzle Pieces Sheet



STEP 2: Students cut out puzzle pieces.



STEP 3: Students match puzzle pieces.



RESOURCE 5: FUN GROUP REVIEW - Respiratory System Tarsia Puzzle Game

USEFUL FEATURES OF THIS RESOURCE

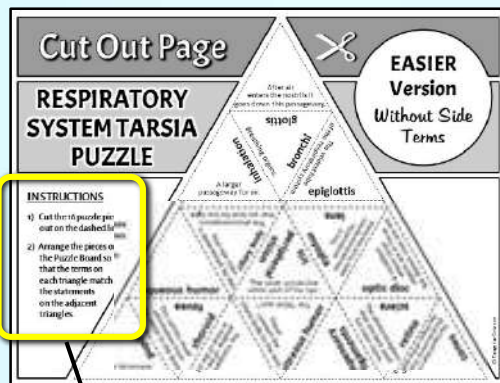
A List of the Terms is Provided

- This list quickly tells you what terms and statements are used in the puzzle.

RESPIRATORY SYSTEM TARSIA PUZZLE	
18 TERMS LIST	
Terms	Questions
nostrils	Two small openings that allow air in and out.
nasopharynx	After air enters the nostrils, it goes down this passageway.
oral cavity	A larger passageway for air.
pharynx	A passageway shared by both air and food.
epiglottis	Thin tissue over the glottis during swallowing.
glottis	The opening in the larynx.
larynx	The voice box.
trachea	The windpipe or the respiratory system.
bronchus	Passes air into the lungs.
bronchioles	Small branches that lead into the lungs.
alveoli	Small sacs at the end of the bronchioles where gas exchange occurs.
diaphragm	Muscle that contracts and relaxes to move air in and out of the lungs.
rib cage	Protects the lungs and heart.
intercostal muscles	Muscles found between the ribs.
pharynx	Passageway for food and air.
epiglottis	Thin tissue over the glottis during swallowing.
glottis	The opening in the larynx.
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rib cage	Protects the lungs and heart.
intercostal muscles	Muscles found between the ribs.

Easy Instructions for Student Use

- Instructions are conveniently printed on the "Cut Out Page" as well as on the "Puzzle Board" to remind students of what to do for this activity.

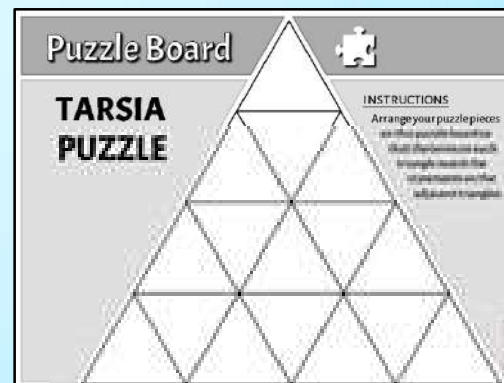
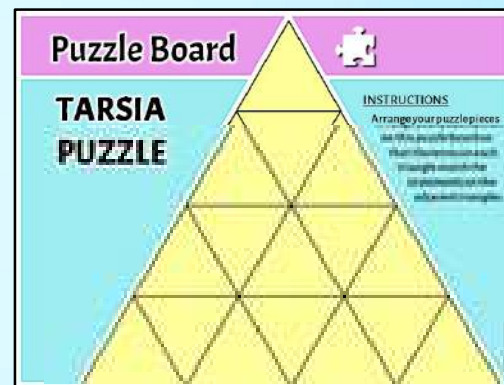


INSTRUCTIONS

- 1) Cut the 16 puzzle pieces out on the dashed lines.
- 2) Arrange the pieces on the Puzzle Board so that the terms on each triangle match the statements on the adjacent triangles.

Reusable Puzzle Boards

- Print out one class set of the boards on card stock, then laminate or use page protectors. Choose between color or black and white. Once prepared, these boards can be used for other Tangstar Science Tarsia Puzzles.



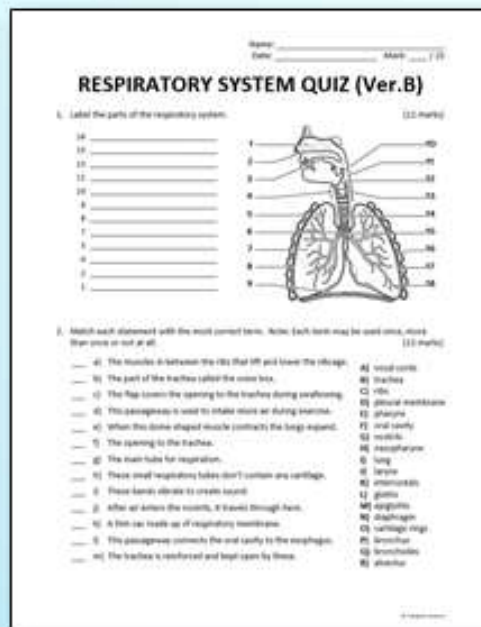
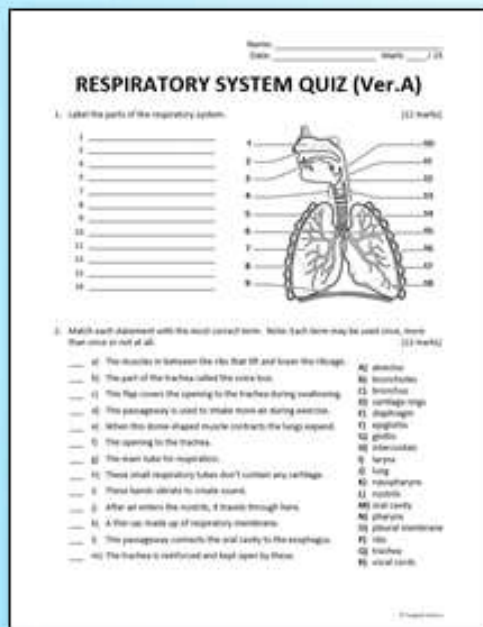
RESOURCE 6: ASSESSMENT - Respiratory System Quiz with Two Versions

TWO VERSIONS PREVENT CHEATING

- Version A and B contain the same questions but in mixed order.
- This allows you to alternate them between adjacent neighbours to deter cheating.

Version A

Version B



IT'S EDITABLE

- Allows you to customize, add or delete questions.

EASY PRINTING

- Single page quiz saves on printing, time and money.

25 MARKS, STRAIGHTFORWARD QUESTIONS

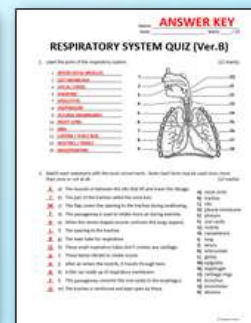
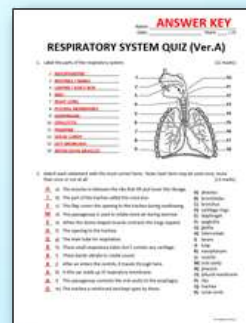
- 12 marks labelling a diagram.
- 13 marks matching questions.

DIAGRAM

- I drew the diagram myself in Adobe Illustrator so that it would be clear and accurate.

ANSWER KEY

- Makes marking quick and easy.



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