

O₂max

BREATHING & LUNG HEALTH

INTRODUCTION



O₂max is a digital learning program aimed at improving our 8 yr – 12 yr olds understanding of their respiratory system. It has been developed to maximise learning through interactive, progressive learning concepts.

O₂max can be used via our Online platform or it can be delivered via a toolkit that enables offline access.

ONLINE: Teachers, Nurses, Parents, Social Service facilitators can use the online portal for students and children to play and learn from, at the same time they can monitor students' progress. The resource is FREE and accessible from any device that can connect to the internet. Good internet speed is recommended to ensure the video content plays well.

To connect to O₂max visit www.o2max.co.nz and create an account, or just use your Google or Microsoft accounts to login.

OFFLINE: Teachers, Nurses, Parents, Social Service facilitators can use the offline version for students and children to play and learn from. The resource is FREE and accessible from the Asthma NZ website under the O2MAX tab. The questions are printable and there is a section that links to all the learning videos. Access to a projector for these videos would be needed to be able to answer the questions. Qualified teacher or health professional may also teach and deliver the lessons in person without the need of videos.

The resource has 8 quests or levels. Each quest is made up of video lessons and 10 questions. Players/students earn O₂ (oxygen) for correct answers and this is totalled up through the game and learning resource. It is recommended that students and players do at least two quests at a time. All 8 quests at one time may take a while and may reduce the amount of knowledge retained.

There is a dashboard for teachers and parents to use that allows students and children's progress of each quest to be monitored.

QUEST ONE

O₂max

PŪKAHUKAHU Ora
Healthy Lungs

1. Do you know where your lungs are in your body?

Circle where you think they are...

In my chest

In my tummy

Behind my ribs

Don't know

2. Draw an arrow to where the organs should go



3. Circle 3 things your body needs to live



4. Draw a line from each question to the correct answer

TV

WAI/WATER

HĀ/AIR

CAR

KAI/FOOD

INTERNET

CLOTHING

VOLLEYBALL

5. How long can you live without kai/food? (Circle the correct answer)

MINUTES

DAYS

WEEKS

6. How long can you live without wai/water? (Circle the correct answer)

MINUTES

DAYS

WEEKS

7. How long can you live without hā/air? (Circle the correct answer)

MINUTES

DAYS

WEEKS

8. If petrol is the fuel that keeps a car going, what fuel must humans have to live?

9. Draw a line to the Te Reo Māori word with the “need to live” English terms?

WATER

FOOD

DRINK

BREATHE

HĀ

WEEKS

WAI

KAI

10. When you breathe in, your lungs get bigger and your puku (tummy) pushes out?

TRUE

FALSE

QUEST TWO

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PŪKAHUKAHU Ora
Healthy Lungs
ADVANCED

1. What do we breathe in? (Circle)

O₂ (OXYGEN)

CO₂ (CARBON DIOXIDE)

LUNGS

RESPIRATION

2. What do we breathe out? (Circle)

O₂ (OXYGEN)

CO₂ (CARBON DIOXIDE)

LUNGS

RESPIRATION

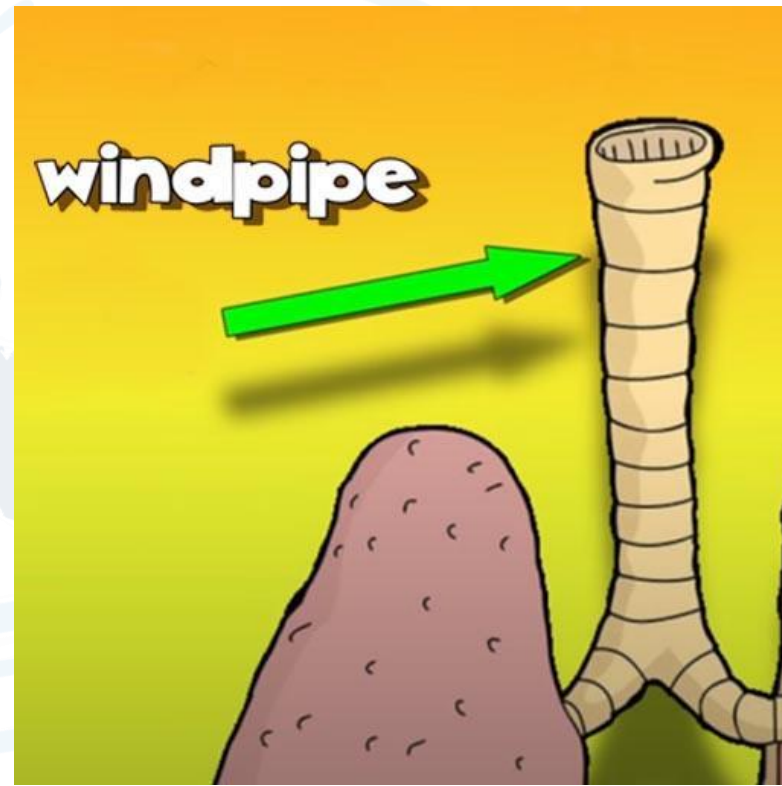
3. Circle the correct medical term for windpipe?

TRACHEA

WINDPIPE

LARYNX

LUNGS



4. Circle the medical term for the things inside your lungs?

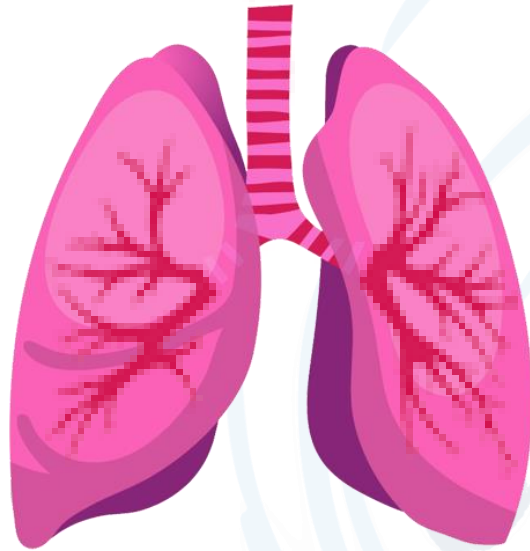
5. Draw an arrow to where the organs should go

TREES

PIPES

BRONCHIOLES

LUNGS



6. The trachea splits into two what?

HEARTS

BRAINS

BRONCHI

HANDS

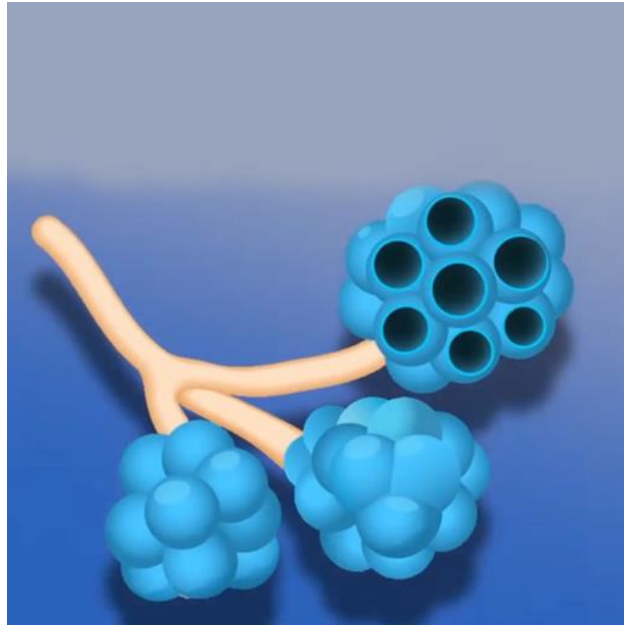
7. Draw a circle around the correct medical name of the parts in the picture.

ALVEOLI

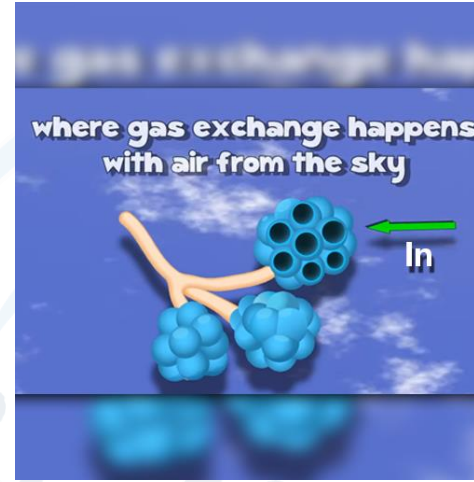
TRACHEA

LAYRNX

BRONCHIOLES



9. Draw an arrow from the words to the correct gas exchange pictures.



OXYGEN

CO2

O2

CARBON DIOXIDE

8. Write the name of the part of the lungs that helps gas exchange when we breathe

10. Are you able to make your puku (tummy) push out when you breathe in?

YES

NO

QUEST THREE

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**ALLERGIES &
TRIGGERS**

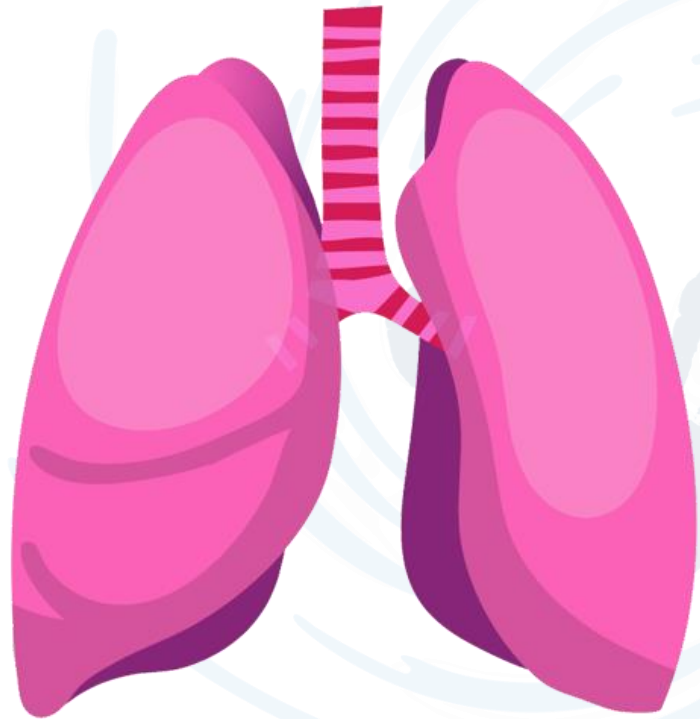
1. Circle all the triggers/allergens you can see in this picture



2. Name something you or a friend is allergic to:

4. Draw a line from the four triggers featured in the video lesson onto the lungs?

- POLLEN
- HAY FEVER
- SMOKING
- WATER
- NUTS
- FUR
- TISSUES



5. What % of asthma is triggered by an allergy?

- 10%
- 100%
- 60%
- NONE OF THE ABOVE

6. Write the name of this trigger in this photo?



7. We may not always be aware of what the trigger is. For example dog fur on someone else's jacket. Write another example you can think of?

8. Name three ways you can reduce triggers in your home?

1. _____

2. _____

3. _____

9. Circle 4 things YOU can do to reduce triggers in your home.

VACUUM REGULARLY

KEEP YOUR ROOM CLEAN

LEAVE YOUR WET SHOES OUTSIDE

DON'T LEAVE FOOD SCRAPS IN YOUR SCHOOLBAG

STOP COLD AIR COMING IN

OPEN YOUR CURTAINS DURING THE DAY

MOVE BED AWAY FROM WINDOW

USE FAN WHEN SHOWERING

10. When you breathe in, your lungs get bigger and your puku (tummy) pushes out?

TRUE

FALSE



QUEST FOUR

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**ALLERGIES &
TRIGGERS
ADVANCED**

1. What is the mission of our immune system?

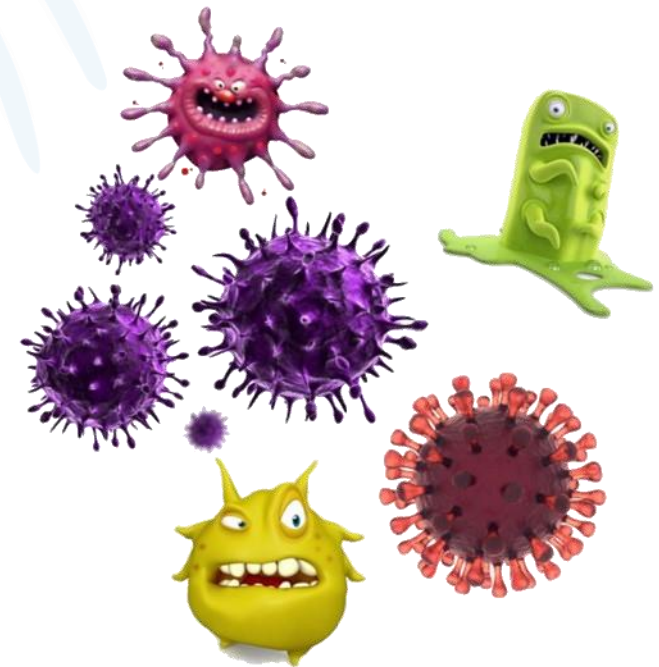
- MAKE US SICK
- PROTECT US FROM GERMS AND DISEASES
- MAKE US HUNGRY
- GIVE US ENERGY

2. What are the foreign invaders called?

- ARMIES
- INVADERS
- ALIENS
- ANTIGENS

3. Select all of the invaders you heard in the video

- ALLERGENS
- VIRUSES AND BACTERIA
- GERMS AND FUNGUS
- SNOT
- WATER



4. Circle 4 things YOU can do to reduce triggers in your home.

VACUUM REGULARLY

KEEP YOUR ROOM CLEAN

LEAVE YOUR WET SHOES OUTSIDE

DON'T LEAVE FOOD SCRAPS IN YOUR SCHOOLBAG

STOP COLD AIR COMING IN

OPEN YOUR CURTAINS DURING THE DAY

MOVE BED AWAY FROM WINDOW

USE FAN WHEN SHOWERING



5. What is the missing word in this sentence? "When we eat food, it gets broken into _____ pieces?"

6. What are the cells called that are ready to catch the allergen invaders? *Circle correct answer*

CATCHERS

EATERS

ARMY CELLS

MAST CELLS

7. Write one of the common foods mentioned in the video that are allergen invaders?

8. What should you do if you see someone having breathing problems, swollen face or throat, skin rash, sick or dizzy?

LIE THEM ON THEIR SIDE

GET HELP FAST, TELL A GROWN UP

FREAK OUT AND DO NOTHING

SIT THEM ON A CHAIR, LEANING FORWARD

9. Peanuts can be found in biscuits, cakes, cereals, chocolate and oils?

TRUE

FALSE

10. Write down the symptoms a friend would have if they were having an allergic reaction?

QUEST FIVE

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**THAT DIRTY
WORD.....
SMOKING**

1. Why do you think people smoke?

2. What would you say to a friend that started smoking?

3. Can the smoke from people smoking around you affect your lungs?

YES

NO

NOT SURE



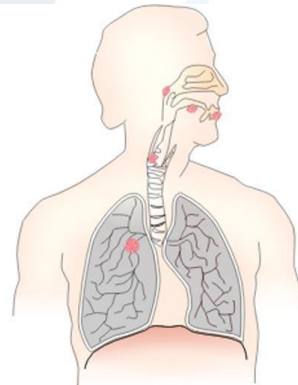
4. How many chemicals and poisons are there in a cigarette?

- 50
- 500
- 5,000
- 50,000

6. Does smoking affect our ability to smell?

- YES
- NO
- ONLY A LITTLE BIT

5. Circle the picture of what part of the body does TAR affect first?



7. Write what chemical makes smoking addictive?

8. Quitting smoking doesn't benefit the body because the damage is already done.

TRUE

FALSE

9. Draw a line to the matching words.

5,000

TAR

SMELL

NICOTINE

LOSS

CHEMICALS

TEETH

DOPAMINE

10. When you breathe in can you feel your puku (tummy) pushing out?

YES

NO

QUEST SIX

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SMOKING ADVANCED

1. After watching the video, type in what you would do if you were the Shop Assistant?



2. How would your Mum or Aunty respond?

- OF COURSE, HERE YOU GO.
- CAN I HAVE ONE WITH YOU?
- NO, NEVER, SMOKING IS A HARMFUL HABIT
- I CAN BUY YOU SOME MORE.

3. What would you do if you were this older boy?

4. Circle the picture of what the man said smoking will impact.



5. What did you like about the way he responded?

6. How do you think smoking will affect your breathing over time?

7. What puts you off smoking?



8. What would you say to a friend to put them off smoking?



9. Have you been taught about the dangers of smoking at school?

YES

NO

NOT SURE



QUEST SEVEN

O₂max

**UNDERSTANDING
ASTHMA**

Quick Revision

1. How many chemicals and poisons are there in a cigarette?

50

500

5,000

50,000

2. Draw an arrow to where the organs are located in your body



3. If petrol is the fuel that keeps a car going, what fuel must humans have to live?

4. Choose two of the below options that are symptoms of a Asthma attack?

GRUMBLING TUMMY

A COUGH

SORE FEET

TIGHT CHEST

6. What areas of the Respiratory System does Asthma particularly affect?

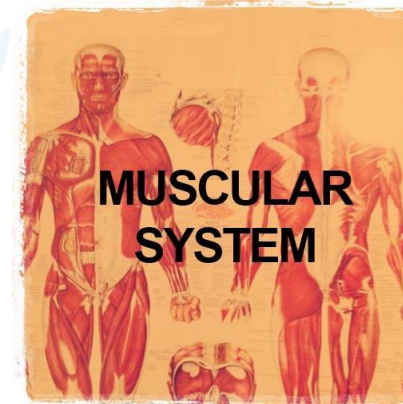
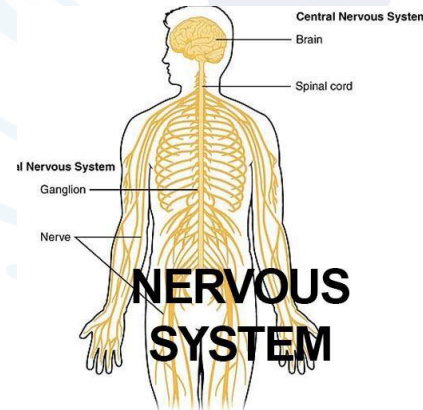
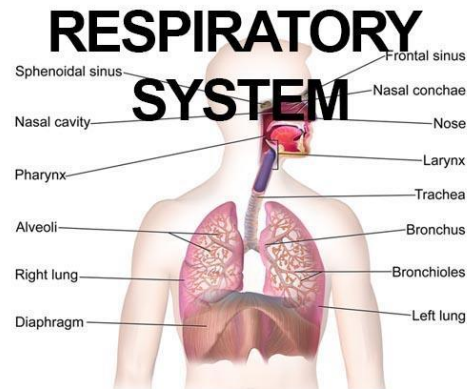
BRONCHI AND BRONCHIOLES

FRONTAL SINUS

NASAL CAVITY

TRACHEA

5. Circle the picture of the system in the body that is affected by Asthma.



7. Circle what happens to a person with asthma' airway when they are exposed to a trigger.

- DRYING OF AIRWAYS
- OPENING WIDER
- BECOMING ITCHY
- AIRWAY BECOMES INFLAMED



NORMAL



ASTHMA



ASTHMA
ATTACK

8. Is it true that during an asthma attack it can be harder to breathe out than breathe in?

TRUE

FALSE



9. Can a person having an asthma attack make a whistling sound when breathing out?

YES

NO

10. Can a person die from Asthma?

YES

NO



QUEST EIGHT

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**UNDERSTANDING
ASTHMA
ADVANCED**

1. Finish this sentence by saying the word out loud - Asthma affects the airways by reducing the flow of _____

2. Circle at least three things to you can look out for, to recognise asthma in yourself, a friend or whānau member.

COUGHING

WHEEZING

TIGHTNESS IN CHEST

BREATHLESSNESS

HARD TO TALK

LIPS ARE BLUEISH



3 & 4. Draw a line to place the steps in the correct order



STEP 1

Repeat five times



STEP 2

Stay calm /
Sit up straight



STEP 3

Six breaths of
inhaler from spacer



STEP 4

Continue process



STEP 5

Repeat sequence
until emergency
services arrive



STEP 6

If no improvement
call 111

5. Do you feel more confident to help somebody having an Asthma attack?

YES

NO

6. Do you think you might have Asthma?

YES

NO

I DON'T THINK SO

I MIGHT DO

7. Does anyone you know have Asthma?

YES

NO

UNSURE

8. Explain what you would do no if you saw someone having an Asthma attack:

9. How much more knowledgeable are you about Asthma now?

I'M NOT

A LITTLE

50:50

A LOT

10. When you breathe in do your lungs get bigger and your puku (tummy) push out?

YES

NO