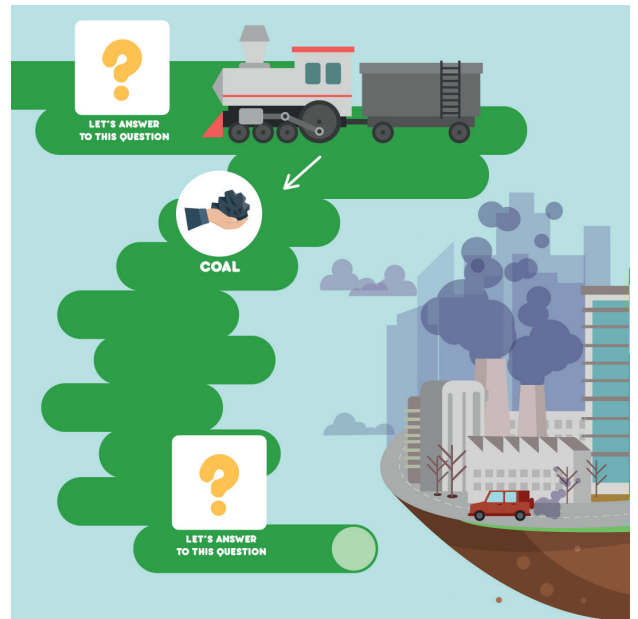
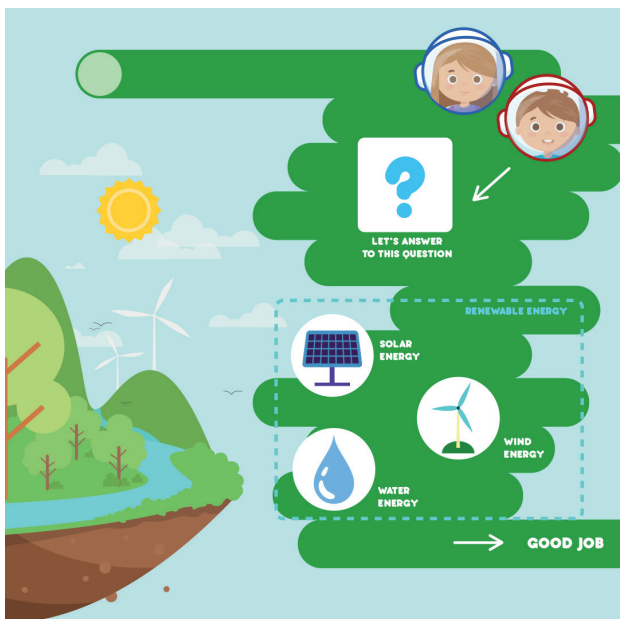
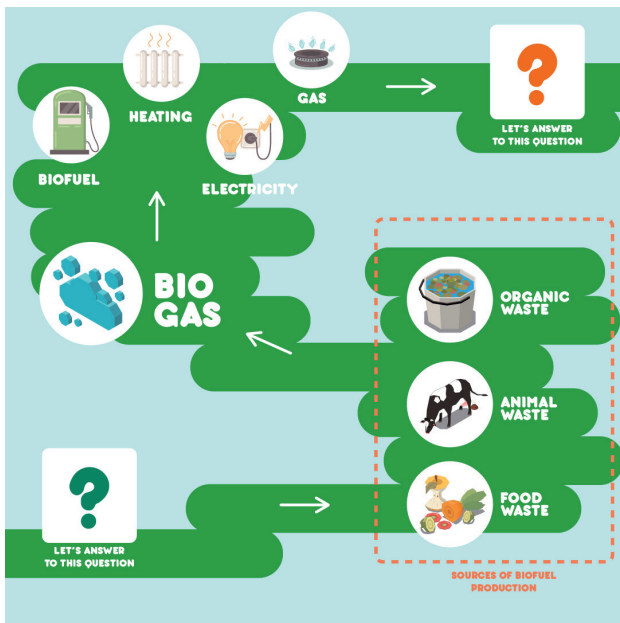


RENEWABLE ENERGY & FOSSIL FUEL: MONSTER VS CLEAN ENERGY

MAT8. Coding literacy for the lessons.

START



FINISH

Project Number:

2023-1-IT02-KA220-SCH-000157934

Funded by the European Union.

Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Education and Culture Executive Agency (EACEA). Neither the European Union nor EACEA can be held responsible for them.

Attribution-NonCommercial-ShareAlike 4.0 International

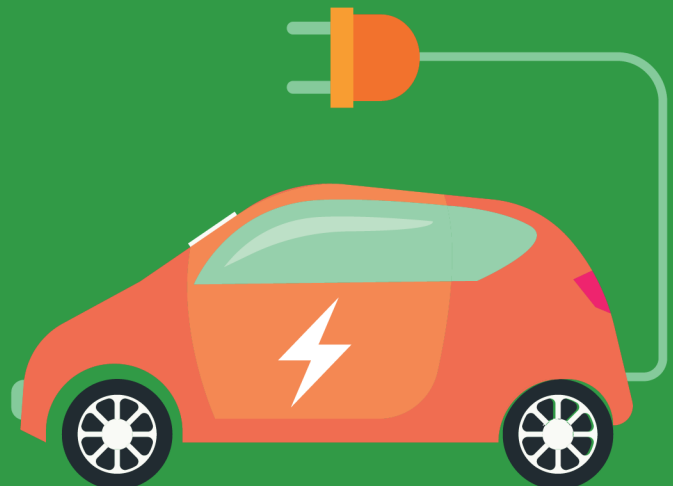


THE ENVIRONMENT AND SUSTAINABLE DEVELOPMENT



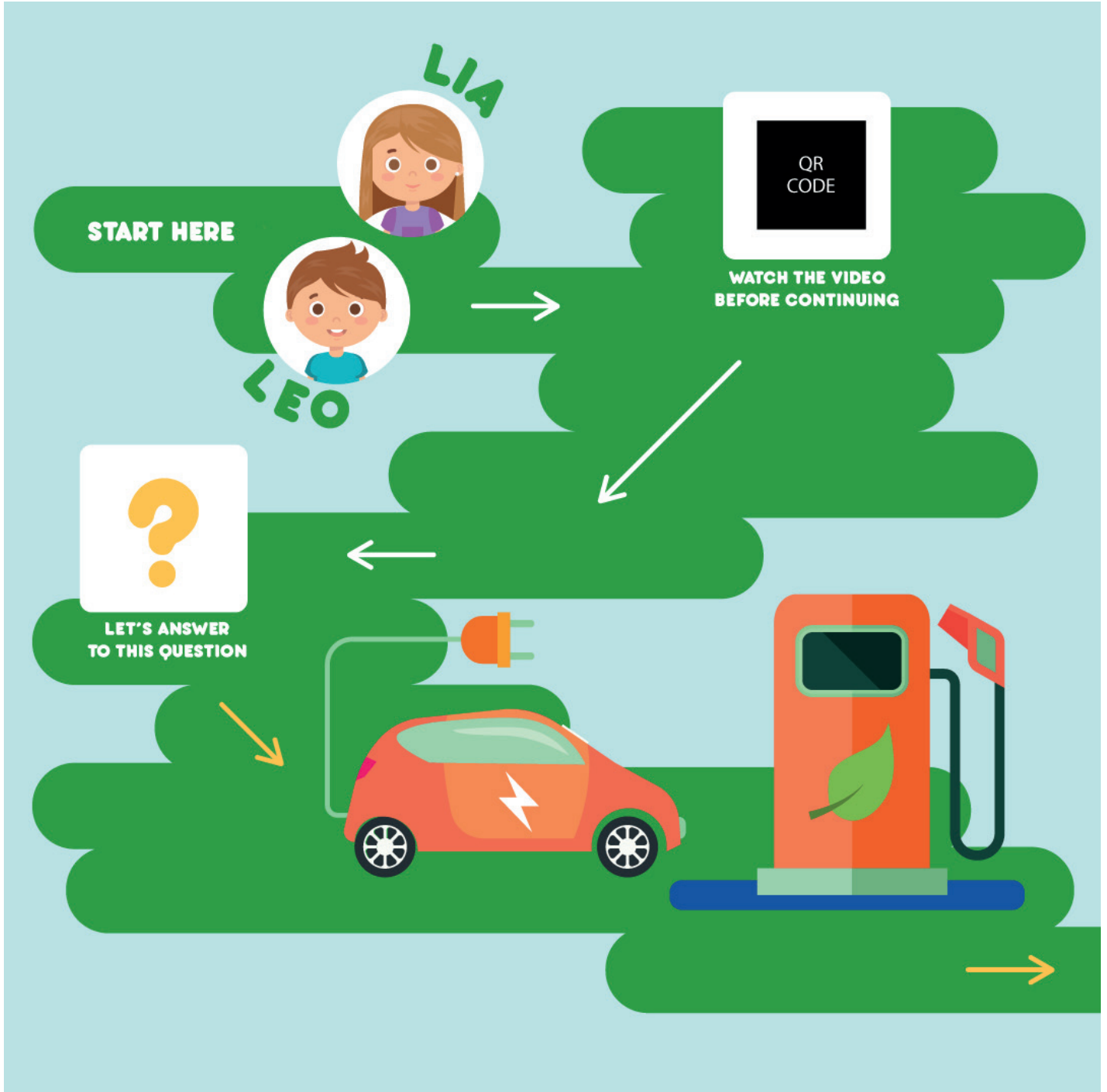
1

LESSON



Section of the map

This section of the map is dedicated to the first lesson and is used as a background on Scratch.
The first lesson focuses on the topic of fossil fuels, pollution, and alternative energy sources.



Activities description

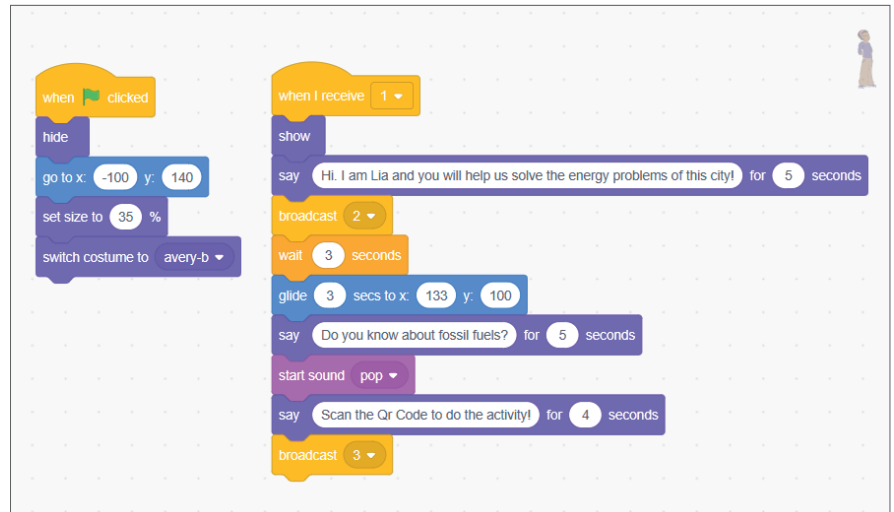
Screenshots n. 1 and 2 refer to the code blocks related to the sprite "Avery."

Screenshots n. 3 and 4 refer to the code blocks related to the sprite "Dani."

Screenshot n. 5 refers to the code blocks related to the sprite "Giga."

Screenshot n. 6 refers to the code blocks related to the sprite "Question mark."

1

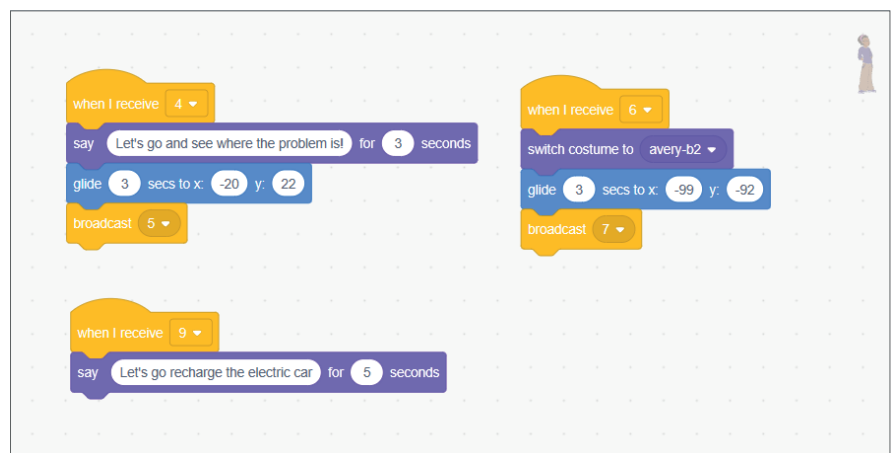


```

when clicked
  hide
  go to x: -100 y: 140
  set size to 35 %
  switch costume to avery-b

when I receive 1
  show
  say Hi, I am Lia and you will help us solve the energy problems of this city! for 5 seconds
  broadcast 2
  wait 3 seconds
  glide 3 secs to x: 133 y: 100
  say Do you know about fossil fuels? for 5 seconds
  start sound pop
  say Scan the Qr Code to do the activity! for 4 seconds
  broadcast 3
  
```

2



```

when I receive 4
  say Let's go and see where the problem is! for 3 seconds
  glide 3 secs to x: -20 y: 22
  broadcast 5

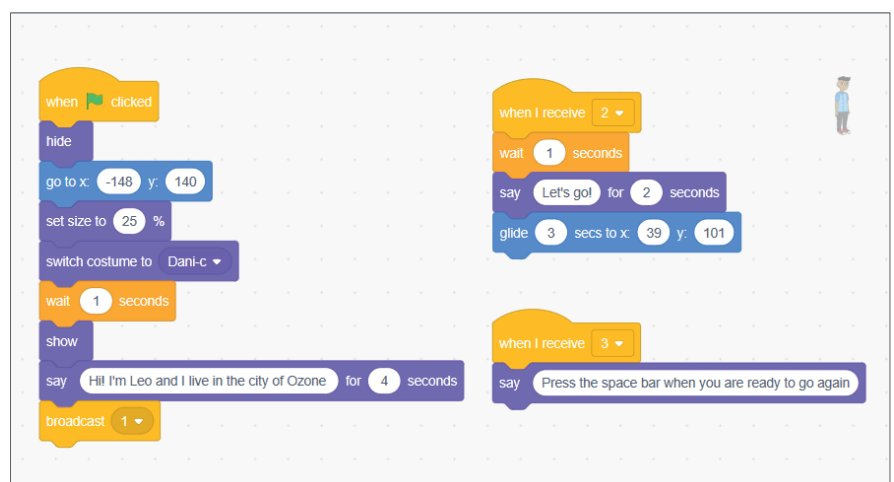
when I receive 6
  switch costume to avery-b2
  glide 3 secs to x: -99 y: -92
  broadcast 7

when I receive 9
  say Let's go recharge the electric car for 5 seconds
  
```

DISCLAIMER:

The screenshots refer to the code related to each sprite and not to individual activities. These sprites interact with each other within the lesson.

3



```

when clicked
  hide
  go to x: -148 y: 140
  set size to 25 %
  switch costume to Dani-c
  wait 1 seconds
  show
  say Hi! I'm Leo and I live in the city of Ozone for 4 seconds
  broadcast 1

when I receive 2
  wait 1 seconds
  say Let's go! for 2 seconds
  glide 3 secs to x: 39 y: 101

when I receive 3
  say Press the space bar when you are ready to go again
  
```

4

```

when space key pressed
  say I heard that there is a leak at the pipeline for 5 seconds
  broadcast 4

when I receive 5
  glide 3 secs to x: -82 y: 14

when I receive 6
  say Well done! Let's go! for 4 seconds

when I receive 8
  glide 3 secs to x: 25 y: -97
  switch costume to Dani-c2
  say In fact, our parents bought an electric car! for 4 seconds
  wait 1 seconds
  broadcast 9
  wait 5 seconds
  start sound pop
  say And you guys, do you understand what alternative sources are? for 3 seconds

```

5

```

when clicked
  hide

when I receive 7
  show
  say There are many chemicals and dirt in gasoline that pollute the air and soil! for 4 seconds
  broadcast 8

when I receive 9
  hide

```

6

```

when clicked
  hide

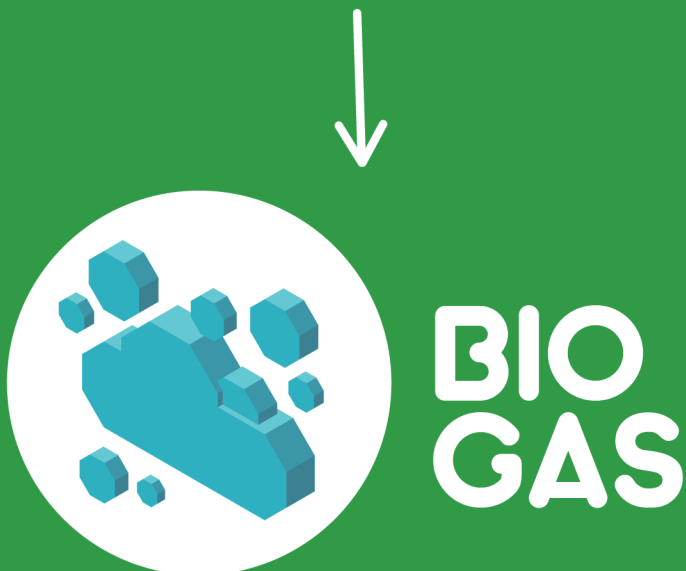
when I receive 5
  hide
  set size to 25 %
  wait 4 seconds
  show
  play sound B Elec Guitar until done
  say Riddle!
  wait 1 seconds
  wait 1 seconds
  ask It is an object on which we eat our meals, and it has 4 paws and wait
  repeat until answer contains TABLE ?
  wait 1 seconds
  repeat 3
    say Try again! (Answer is in English) for 2 seconds
    ask It is an object on which we eat our meals, and it has 4 paws and wait
  wait 1 seconds
  say The correct answer is TABLE!! for 2 seconds
  broadcast 6

```

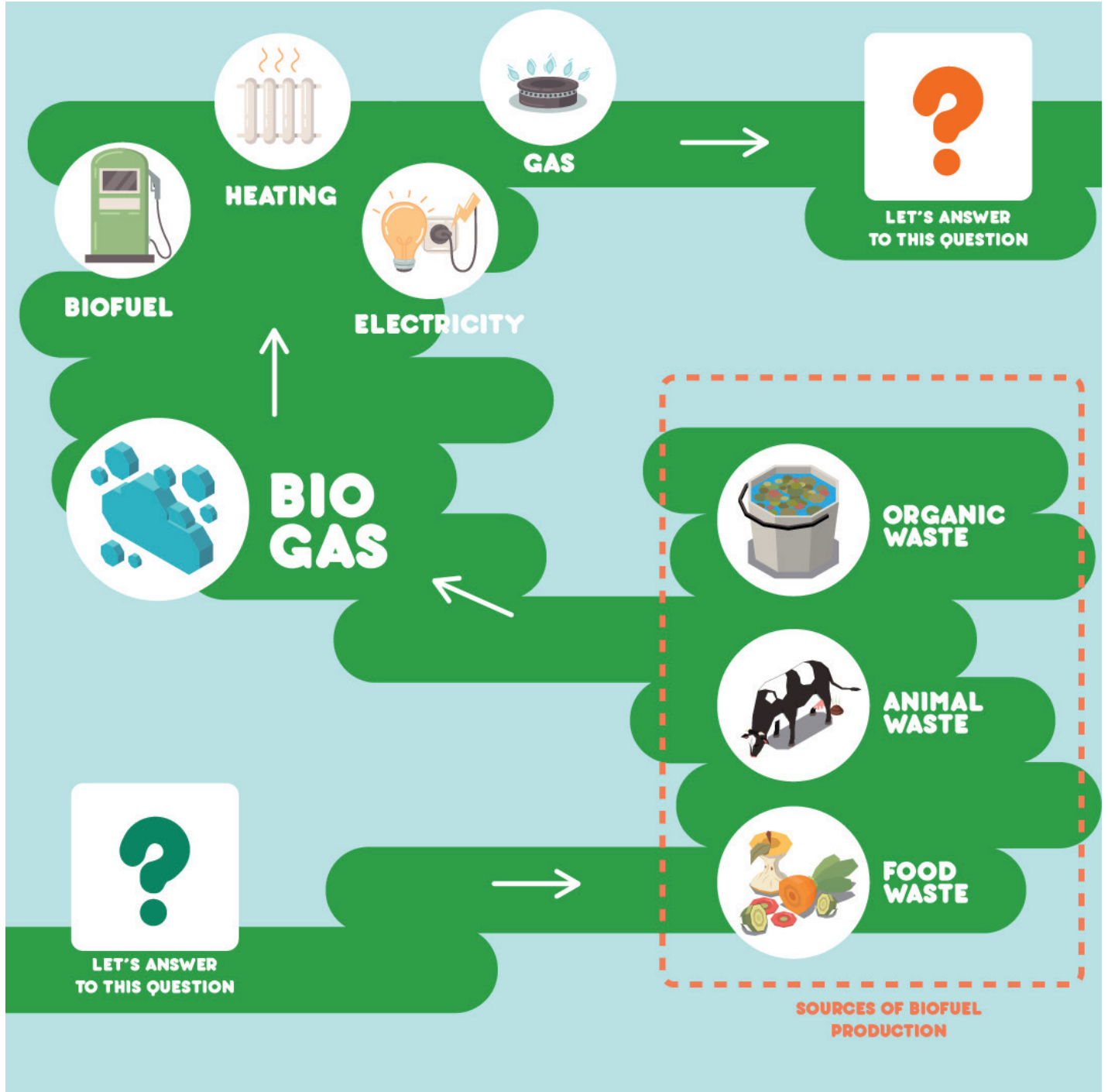
MANY FORMS OF ENERGY



2
LESSON



This section of the map is dedicated to the second lesson and is used as a background on Scratch. The second lesson covers the topic of biogas, their origins, and potential uses.



Activities description

Screenshots n. 1 and 2 refer to the code blocks related to the sprite "Avery."

Screenshot n. 3 refers to the code blocks related to the sprite "Biofuel."

Screenshot n. 4 refers to the code blocks related to the sprite "Dani."

Screenshots n. 5 and 6 refer to the code blocks related to the sprite "Question mark."

1

```

when clicked
hide
set size to 35 %
go to x: 18 y: -78

when space key pressed
show
wait 5 seconds
say 'Here's where alternative fuels come from!' for 4 seconds
broadcast 1
wait 4 seconds
say 'Let's find out which biofuels to use!' for 3 seconds
glide 3 secs to x: -150 y: 17

```

2

```

when I receive 2
say 'We can use them for so many things! Create cards to describe them!' for 4 seconds
wait 1 seconds
say 'Press right arrow to go on!' for 4 seconds

when right arrow key pressed
glide 3 secs to x: 56 y: 146

when I receive 3
say 'Well done!' for 2 seconds

```

DISCLAIMER:

The screenshots refer to the code related to each sprite and not to individual activities. These sprites interact with each other within the lesson.

3

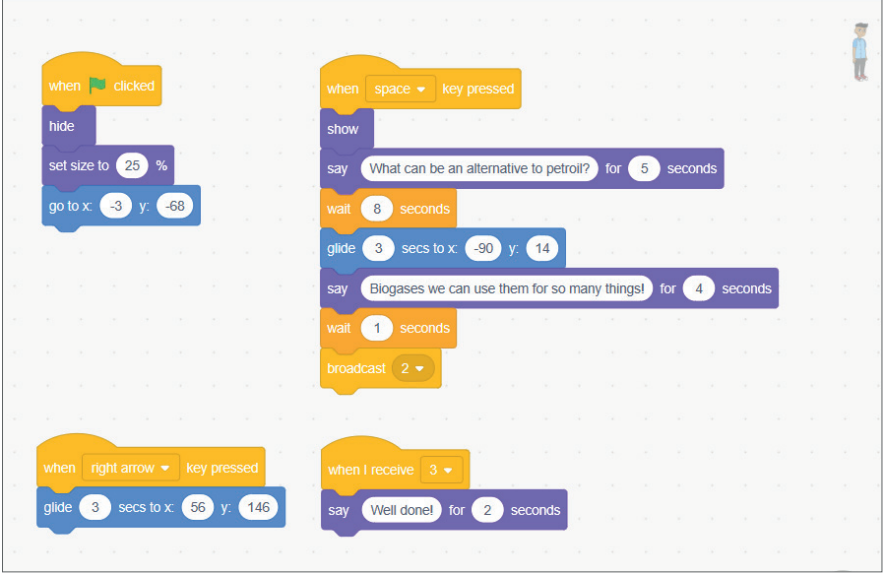
```

when clicked
hide

when I receive 1
set size to 40 %
go to x: 88 y: -29
show
say 'We are WASTE, ANIMAL DISCARDS AND FOOD DISCARDS!' for 4 seconds

```

4



```

when clicked
hide
set size to 25 %
go to x: -3 y: -68

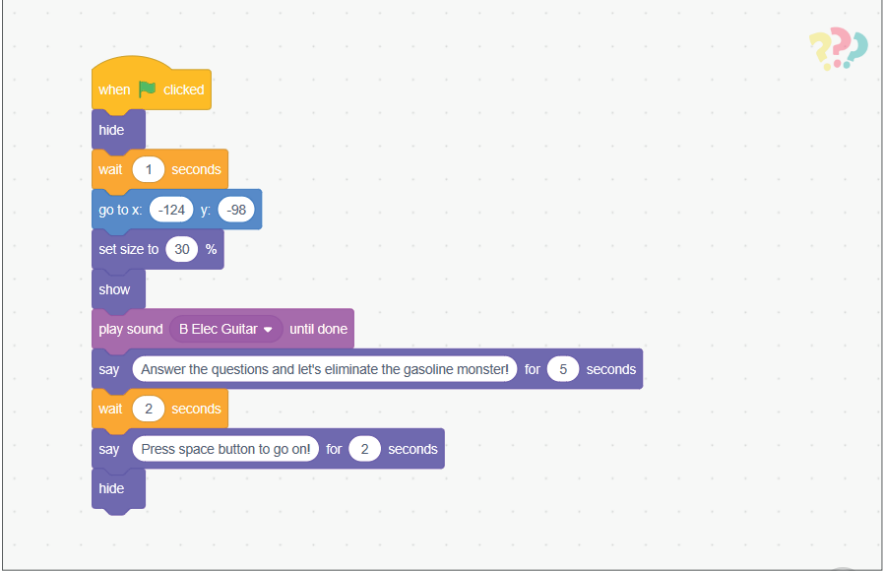
when space key pressed
show
say "What can be an alternative to petrol?" for 5 seconds
wait 8 seconds
glide 3 secs to x: -90 y: 14
say "Biogases we can use them for so many things!" for 4 seconds
wait 1 seconds
broadcast 2

when right arrow key pressed
glide 3 secs to x: 56 y: 146

when I receive 3
say "Well done!" for 2 seconds

```

5

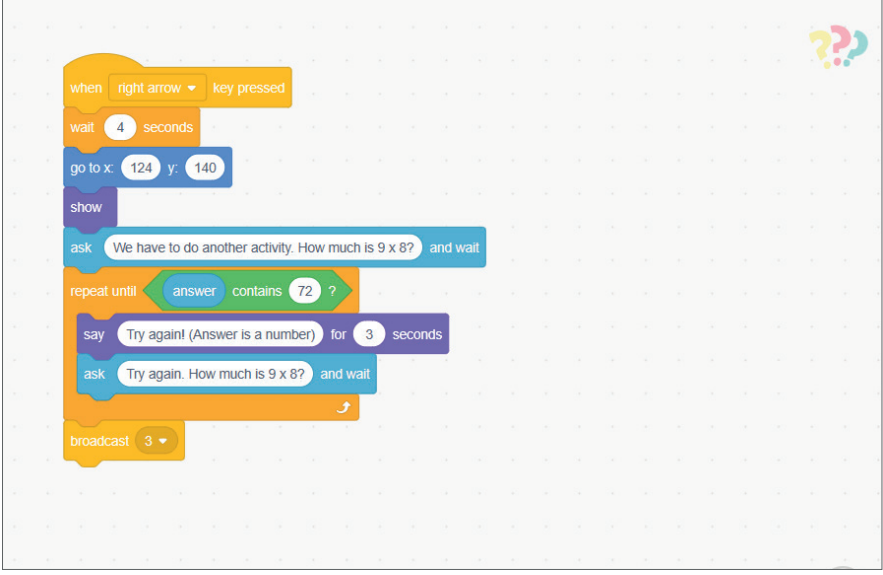


```

when clicked
hide
wait 1 seconds
go to x: -124 y: -98
set size to 30 %
show
play sound "B Elec Guitar" until done
say "Answer the questions and let's eliminate the gasoline monster!" for 5 seconds
wait 2 seconds
say "Press space button to go on!" for 2 seconds
hide

```

6



```

when right arrow key pressed
wait 4 seconds
go to x: 124 y: 140
show
ask "We have to do another activity. How much is 9 x 8?" and wait
repeat until answer contains 72 ?
say "Try again (Answer is a number)" for 3 seconds
ask "Try again. How much is 9 x 8?" and wait
broadcast 3

```

RENEWABLE SOURCES: KNOW AND RECOGNIZE



COAL



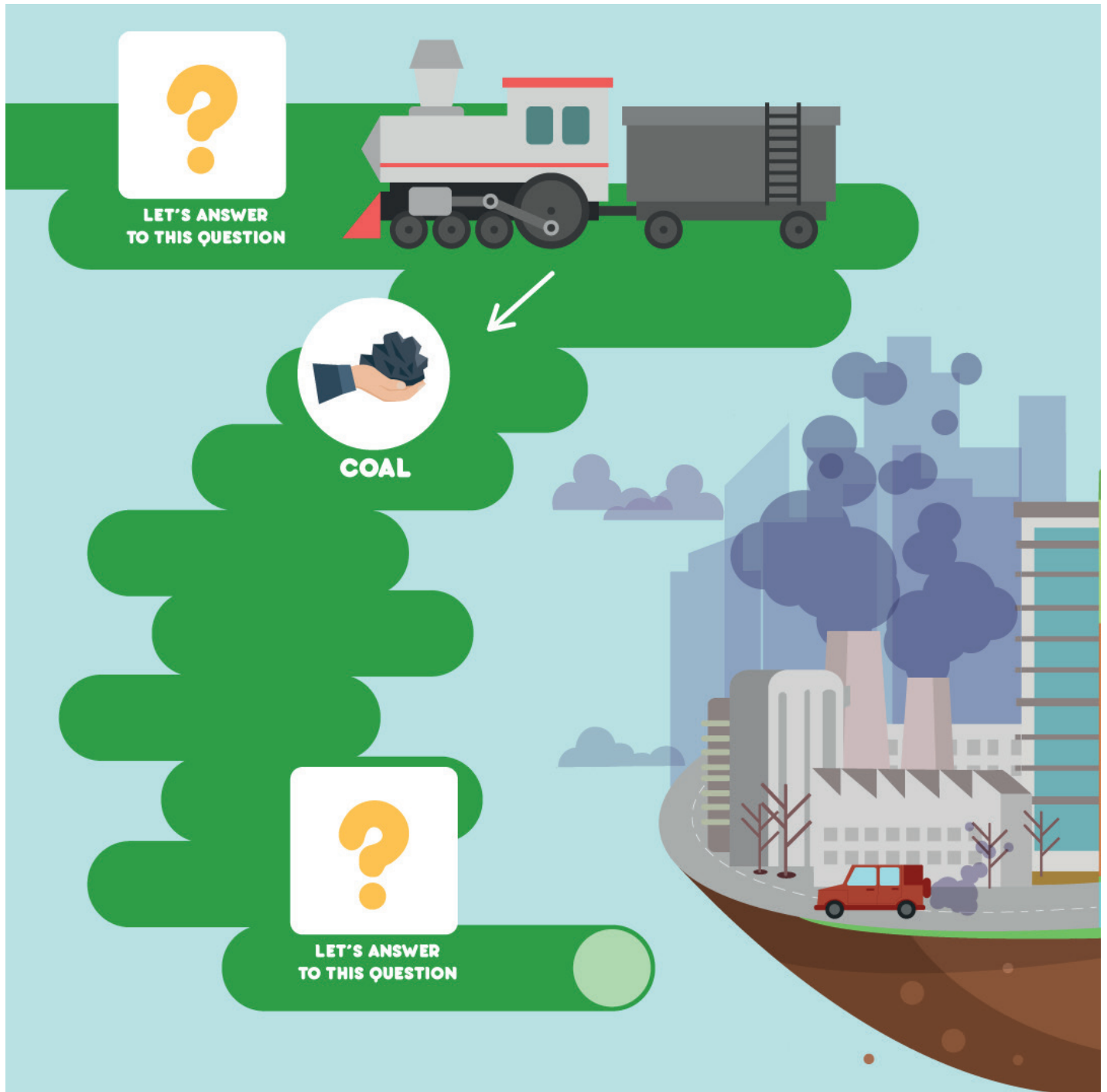
3

LESSON



Section of the map

This section of the map is dedicated to the third lesson and is used as a background on Scratch.
The third lesson deals with the topic of coal, illustrating its origin and modes of use.



Activities description

Screenshot n. 1 refers to the code blocks related to the sprite "Avery."

Screenshot n. 2 refers to the code blocks related to the sprite "Dani."

Screenshot n. 3 refers to the code blocks related to the sprite "Question mark."

4_5: Screenshots n. 4 and 5 refer to the code blocks related to the sprite "Rocks."

Screenshot n. 6 refers to the code blocks related to the sprite "Train."

DISCLAIMER:

The screenshots refer to the code related to each sprite and not to individual activities. These sprites interact with each other within the lesson.

1

```

when clicked
  hide
  set size to 35 %
  switch costume to avery-b2
  go to x: 25 y: 123

when I receive 1
  wait 1 seconds
  show

when I receive 2
  say In the underground! Inside the mines, it is a very ancient fossil! for 4 seconds
  broadcast 3

when I receive 4
  say With coal? for 4 seconds
  broadcast 5

when I receive 6
  wait 1 seconds
  glide 3 secs to x: -8 y: -98
  
```

2

```

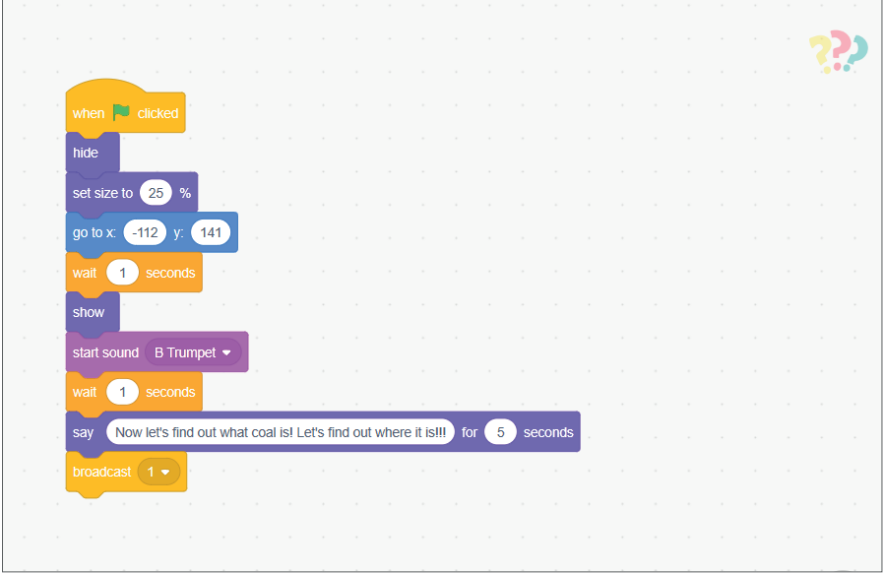
when clicked
  hide
  set size to 25 %
  go to x: -45 y: 132

when I receive 1
  wait 1 seconds
  show

when I receive 2
  say Where is the coal found? for 4 seconds
  broadcast 2

when I receive 6
  wait 1 seconds
  glide 3 secs to x: -102 y: -101
  wait 1 seconds
  start sound A Elec Piano
  ask Guys! Do you know how to replace coal? Yes or No? and wait
  if answer contains YES? then
    say Let's got
  else
    say We have to be willing to help the world. Let's got for 7 seconds
  
```

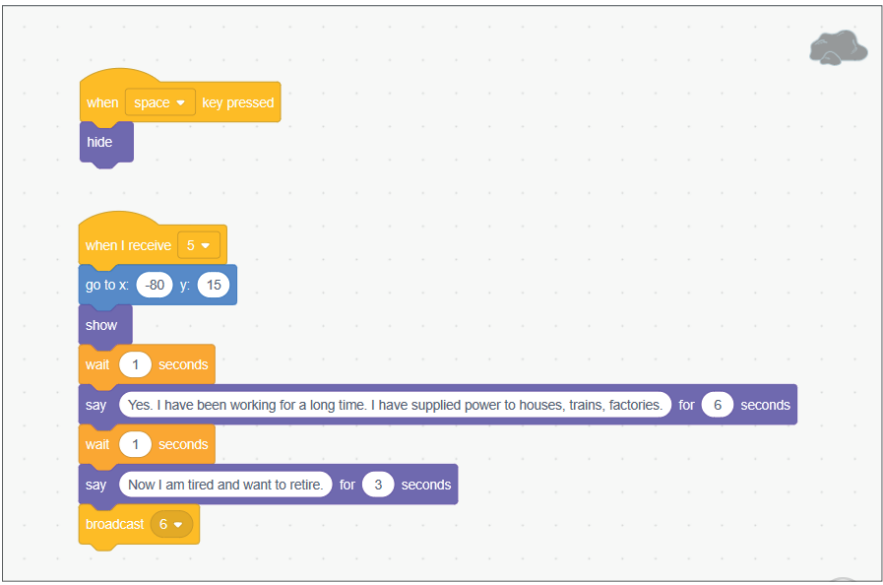
3



Scratch script for step 3:

- when green flag clicked
- hide
- set size to 25 %
- go to x: -112 y: 141
- wait 1 seconds
- show
- start sound B Trumpet
- wait 1 seconds
- say Now let's find out what coal is! Let's find out where it is!!! for 5 seconds
- broadcast 1

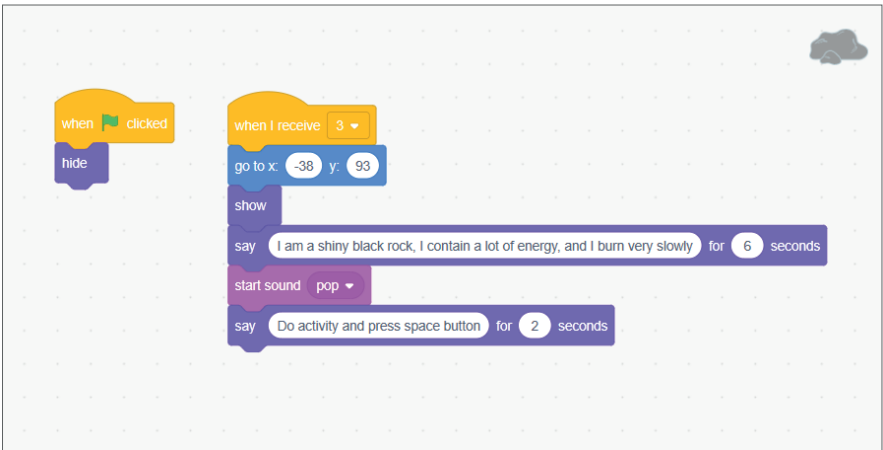
4



Scratch script for step 4:

- when space key pressed
- hide
- when I receive 5
- go to x: -80 y: 15
- show
- wait 1 seconds
- say Yes. I have been working for a long time. I have supplied power to houses, trains, factories. for 6 seconds
- wait 1 seconds
- say Now I am tired and want to retire. for 3 seconds
- broadcast 6

5



Scratch script for step 5:

- when green flag clicked
- hide
- when I receive 3
- go to x: -38 y: 93
- show
- say I am a shiny black rock, I contain a lot of energy, and I burn very slowly for 6 seconds
- start sound pop
- say Do activity and press space button for 2 seconds

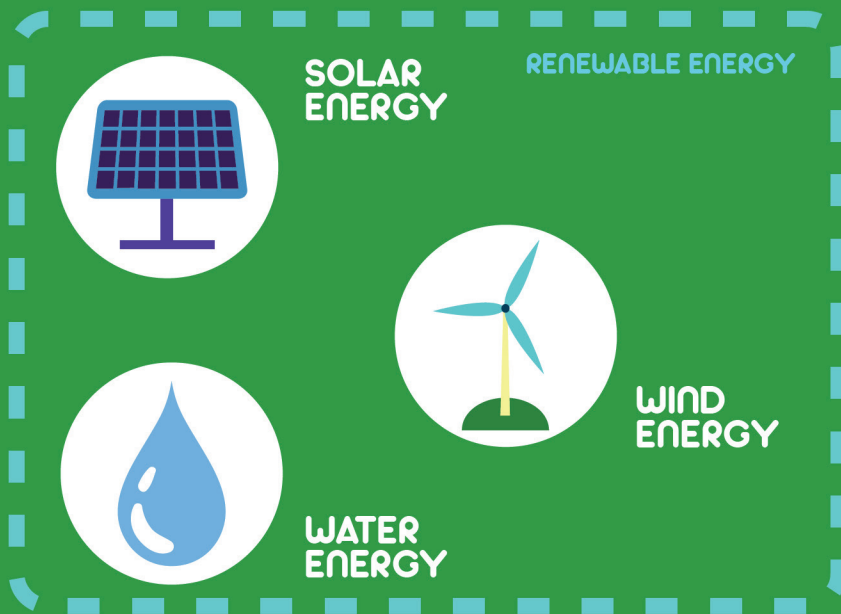
6

The image shows a Scratch script editor with a grid background. The script consists of the following blocks:

- when clicked** (yellow block) connected to **hide** (purple block).
- when space key pressed** (yellow block) connected to a sequence of blocks:
 - wait 1 seconds** (orange block)
 - set size to 50 %** (blue block)
 - go to x: -26 y: 47** (blue block)
 - show** (purple block)
 - wait 1 seconds** (orange block)
 - say Do you know how I move? for 2 seconds** (purple block)
 - broadcast 4** (yellow block)
- when I receive 5** (yellow block) connected to **hide** (purple block).

On the right side of the editor, there is a small train icon at the top and three circular icons at the bottom: a play button, a search icon, and an equals sign.

AIR POLLUTION AND SOLAR ENERGY

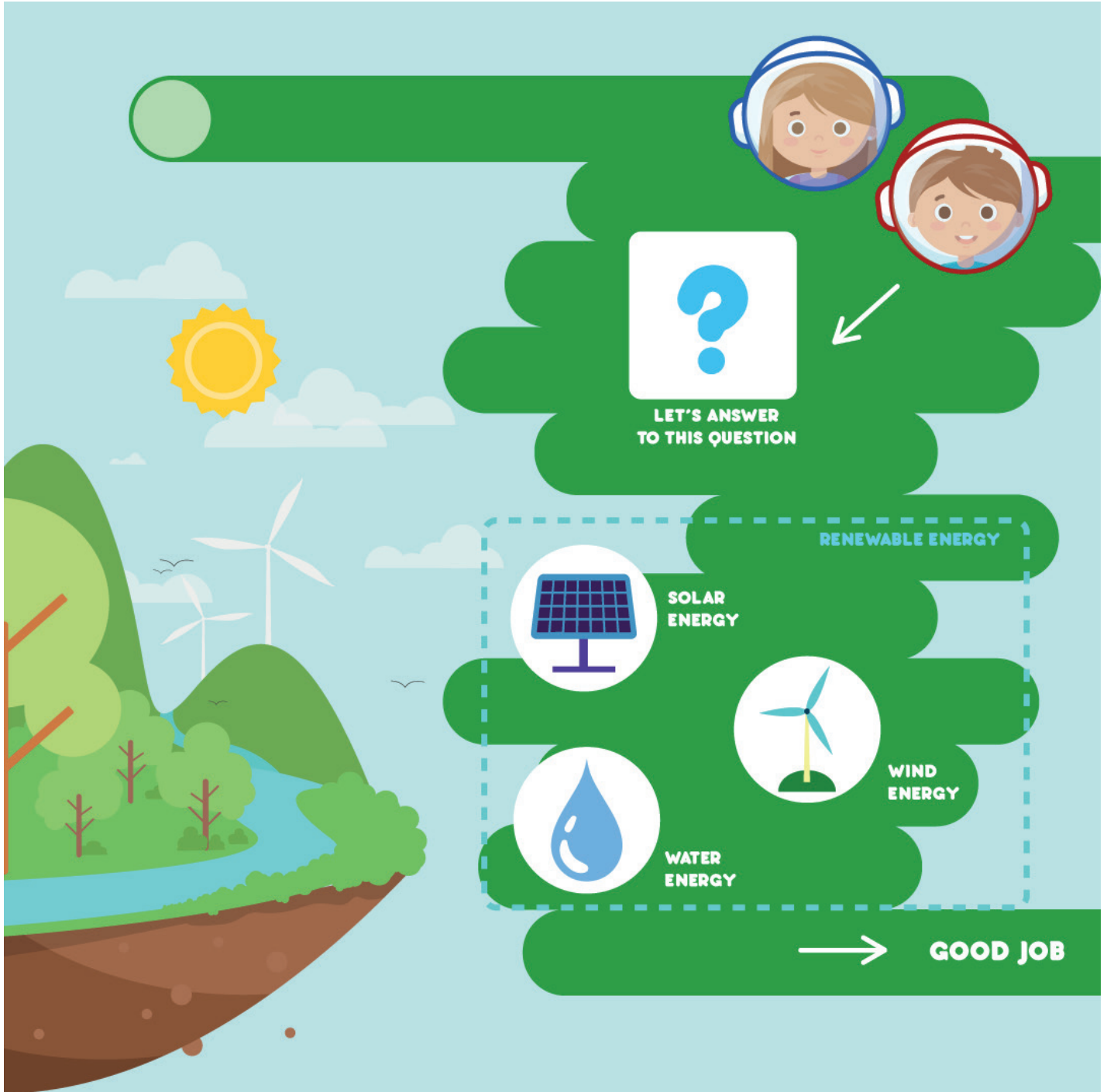


4
LESSON



Section of the map

This section of the map is dedicated to the fourth lesson and is used as a background on Scratch.
The fourth lesson focuses attention on the topic of renewable energy sources.



Activity description

Screenshots n. 1 and 2 refer to the code blocks related to the sprite "Space."

Screenshot n. 3 refers to the code blocks related to the sprite "Gobo."

Screenshot n. 4 refers to the code blocks related to the sprite "Sun."

1

```

when clicked
hide
wait 1 seconds
set size to 75 %
go to x: 47 y: 129
show
wait 1 seconds
say Hi Guyst for 2 seconds
wait 1 seconds
say Do you know why we will no longer use coal? for 5 seconds
wait 1 seconds
say Because it is very polluting! for 4 seconds
wait 1 seconds
broadcast 1

```

2

```

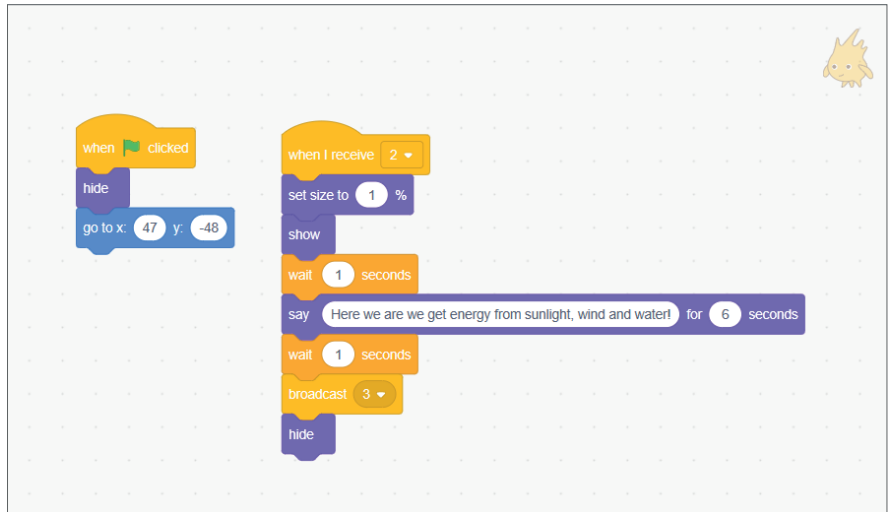
when I receive 3
glide 2 secs to x: 0 y: 16
clear graphic effects
start sound A Elec Piano
say Now guys we have to make a brochure to describe renewable energy! for 4 seconds
wait 1 seconds
say It's your turn, good job! for 2 seconds

```

DISCLAIMER:

The screenshots refer to the code related to each sprite and not to individual activities. These sprites interact with each other within the lesson.

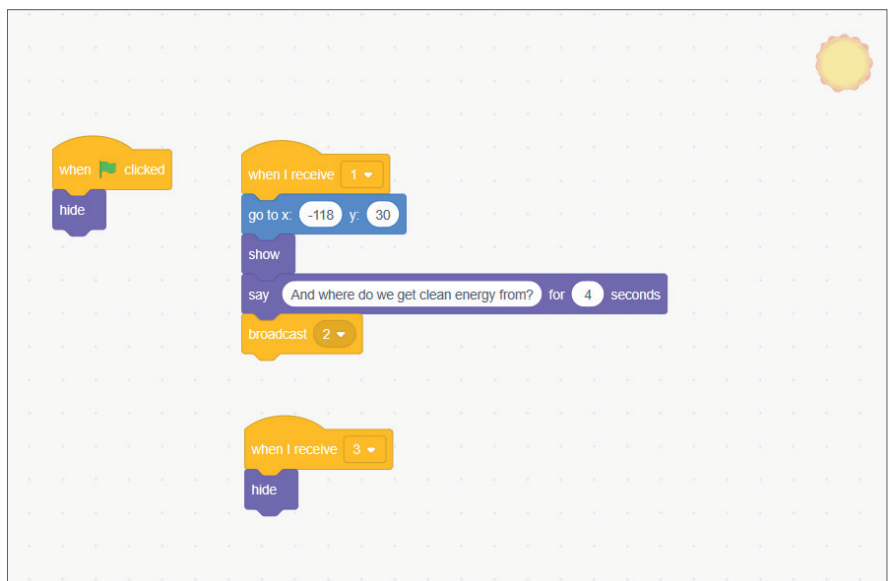
3



Scratch script for a character with a fire-like appearance:

- when clicked: hide, go to x: 47 y: -48
- when I receive 2: set size to 1 %, show, wait 1 seconds, say "Here we are we get energy from sunlight, wind and water!" for 6 seconds, wait 1 seconds, broadcast 3, hide

4



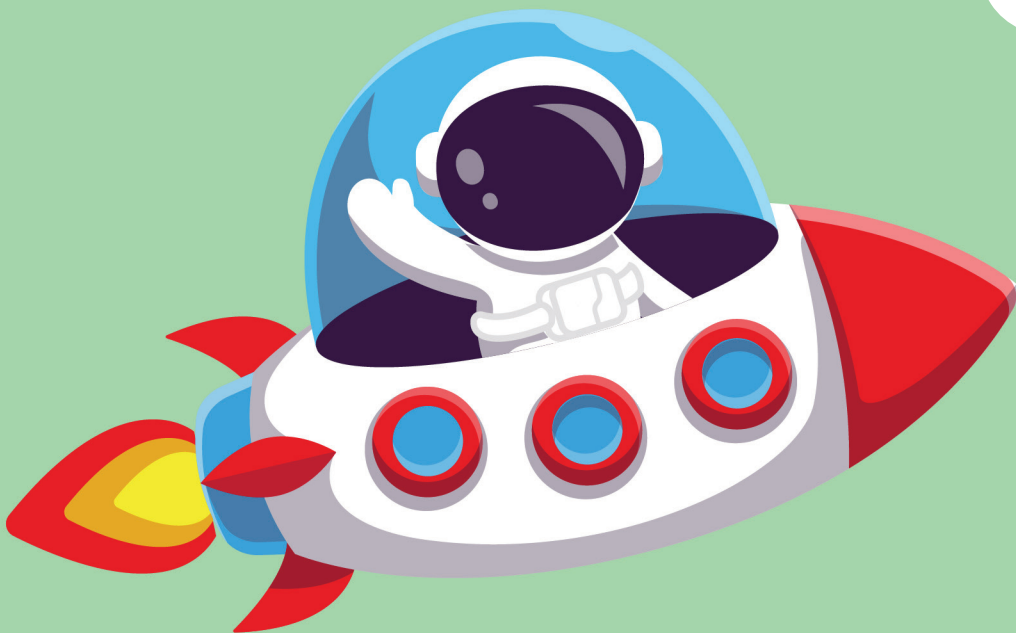
Scratch script for a sun character:

- when clicked: hide
- when I receive 1: go to x: -118 y: 30, show, say "And where do we get clean energy from?" for 4 seconds, broadcast 2
- when I receive 3: hide

PARTNERS

FINISH

5



Main partners



ITALY

The CISL Scuola (Confederazione Italiana Sindacati Lavoratori - Scuola) is the union of the staff of primary and nursery schools, secondary schools and vocational training of the CISL. It was founded in 1997 by the union of SINASCEL (National Union Elementary School) and SISM (Italian Union of Middle School).



SAPIENZA
UNIVERSITÀ DI ROMA

ITALY

Sapienza University of Rome, (Department of Planning, Design, Technology of Architecture). Sapienza was founded by Pope Boniface VIII in 1303. It's one of the oldest universities in the world and the second largest University in EU, with 11 faculties, 63 departments, 111.000 students and more than 4.700 professors.

All partners



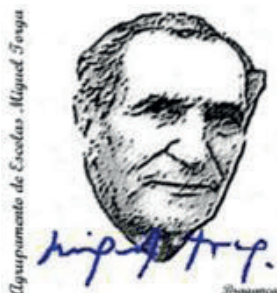
ITALY

Pixel is an education and training institution based in Florence (Italy). Pixel was founded in 1999. Pixel's mission is to promote an innovative approach to education, training and culture, this is done mostly by trying to exploit the best potential of ICT for education and training.



ROMANIA

EuroEd Primary School includes a Kindergarten and a primary school. Both are accredited by the Romanian Ministry of Education. It promotes the EU dimension of education and it also encourages multiculturalism and multilingualism by providing education to children of different nationalities or ethnic groups.



PORTUGAL

The **Agrupamento de Escolas Miguel Torga** is a school located in Bragança, Portugal, an inland city of the country. The school consists of three buildings, two for preschool and elementary school and one for secondary and high school. There are 88 teachers, 2 psychologists and also a speech therapist.



SPAIN

Esciencia is an SME based in Zaragoza established in 2006 as a spin-off of the University of Zaragoza. **Esciencia Eventos Científicos S.L.** is dedicated to the management and organization of science dissemination projects. The company offers both consulting services and the design of educational programs.



BULGARIA

Zinev Art Technologies Ltd. is a company developing, implementing and managing European projects and providing consultations in the spheres of culture, art, Internet-based activities and education, VET, e-learning and school education development, as well as regional development.

