

Reroute better world



The action takes place on European Union. Players plan their cargo logistics from one place to another based on several pre-conditions. The Reroute better world quest develops computational thinking, strategic planning, space orientation and touches upon real life challenges of living together.

Printable resources attached: board x 1, transport piece x 12, starting city card x 12, transport card x 33, point x 74 (1 point x 64, 5 points x 10)

Additional material needed: scissors

Total Duration: 30 min.

Player count: 2-12

Learning objectives



Justifying an approach and the choices made



Understanding the relationship between object and space



Gathering geographical, historical and cultural references



Modeling



Reasoning

Territory 2 - The Strong Community



Linked SDGs

1 NO POVERTY	2 ZERO HUNGER
4 QUALITY EDUCATION	11 SUSTAINABLE CITIES AND COMMUNITIES

Game modalities

8 - 12 years old

Feasible at home

in the classroom

work in group

indoor

This production forms part of the material produced by the Unplugged project which has received funding from the European Union's ERASMUS + programme under grant agreement n° 2020-1-FR01-KA227-SCH-095528. This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

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Co-funded by the
Erasmus+ Programme
of the European Union





Pedagogical interest and topics targeted

Develop one's computational thinking: solve logistics route scheduling problems. A number of preconditions prepare children in applying reasoning and logical skills to prepare their strategies to win. It also teaches to adapt strategies on the go as it suggests a conflict of players' strategies.

Navigate in space: visualize and plan in enough advance the necessary steps to go as far as possible, and if possible to another starting city. Children enhance their geographical knowledge of the world's major cities and their locations. Spatial orientation and means of transport are provided in a fun way.

Coexist with others: make a path in the middle of the other players while trying not to get in their way. Basic concepts of living together are thought in the face of crossing interests and compromises.



Game rules

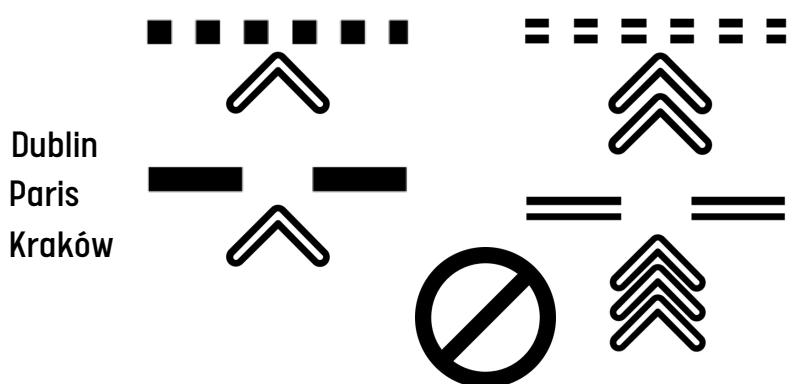
Game narrative: With Reroute a better world, make plans to transport your cargo as far as possible. The other carriers have the same objective and you will have to plan your scheduling to dodge their paths!

Role of the teacher and game organisation: We will call the children, players, and the adult in charge or child-elected, referee. When players take turns to play, the referee decides the turn order.

Installation: Place the game board in the middle of the table. Give the transport piece of their choice to the players.



Shuffle the stack of starting city cards and place it in the middle of the players. Do the same for the stack of transport cards. Taking turns, the players take a starting city card and keep it, and place their transport piece on the corresponding city.





Game rounds

Round 1 - Installation

Place the **points**, 1 point and 5 points, in the middle of the players. The referee is responsible for the points.



Each game turn is made up of three consecutive phases: Scheduling phase / Transport phase / Counting phase

Round 2 - Scheduling phase

Shuffle the stack of transport cards. During the scheduling phase each player:

- takes 4 transport cards, and looks at them **in secret**
- chooses the scheduling order for her/his transport plan by stacking, face down, the drawing transport cards (cards will be disclosed from top to bottom).

To plan their strategy of movement according to their available transport cards, players consider the city of their initial point, the means of transport it has available and the route that could be taken with the available means and the most nearby cities it could go through.

Round 3 - Transport phase

Every transport card is composed of 2 elements: a transport mode and a priority level. During the transport phase, the 4 transport steps are resolved one after the other as follows:

- all players reveal their top transport card in 4 turns;
- all possible transports are played at every turn;
- players having top priority of the respective transport mode make their move first. The priority is determined by the number of arrows the respective cards have illustrated, respectively 3 arrows mean top priority and 1 is the lowest.



Round 3 - Transport phase

Transport moves are made by the **transport mode shown on the card** where possible:

- by road: ■ ■ ■ ■ ■ ■
- by rail: = = = = = =
- by sea or river: ■■■■ ■■■■
- by air: ■■■■ ■■■■

Each city has 3 of the 4 transport modes. It is possible to use a transport mode **only by having the corresponding transport card**.

Transport moves are made by players **simultaneously**, following the **indicated priority on their transport cards** in decreasing order:

- high priority: ↑↑
- average priority: ↑↑
- low priority: ↑

Transports of the same priority are resolved at the same time.

The transport card "cancel" cancels the transport step for the player. 

The transport pieces can **only be in cities**. There can never be 2 pieces (players) in the same city:

- **a transport move cannot be made in an occupied city and is cancelled.**
- two players having the same priority on their transport cards, leading to the same unoccupied city cannot place their transport pieces there. **Both their moves are cancelled.**

These situations can **dramatically change a transport plan**, scheduled for the whole game turn, leading to unpredictable, funny situations or even the complete cancelling of a transport plan.

Round 4 - Counting phase

In the counting phase, each player earns a number of points **matching the number of cities they have crossed** with their transport piece during the game turn. A game turn is considered **one round of selection and playing 4 transport cards**. Several turns/rounds may be played by the time **a player reaches at least 15 points**. If a transport piece ends in a city different from its starting city, **the player earns 2 points**. Any player can at anytime, ask the referee to make a change to their points.



Going further



Topic 1 - Computational thinking

The importance of developing computational thinking and tips could be found here: <https://sphero.com/blogs/news/how-to-teach-computational-thinking-in-classroom>. In addition, to further practice computational thinking, you may wish to refer to other Unplugged quests, among which: *Farm in the City, Good ways, Binary Counting, Peace Magic Grid etc.*



Topic 2 - Navigate in Space

To further practice spatial orientation you may wish to refer to other Unplugged quests, among which: *Farm in the City, Good ways, Plastic continent, etc.* The importance of spatial intelligence and other tips to enhance it can be found here: <https://www.parentingforbrain.com/visual-spatial-reasoning-skills-stem/>



Topic 3 - Coexisting

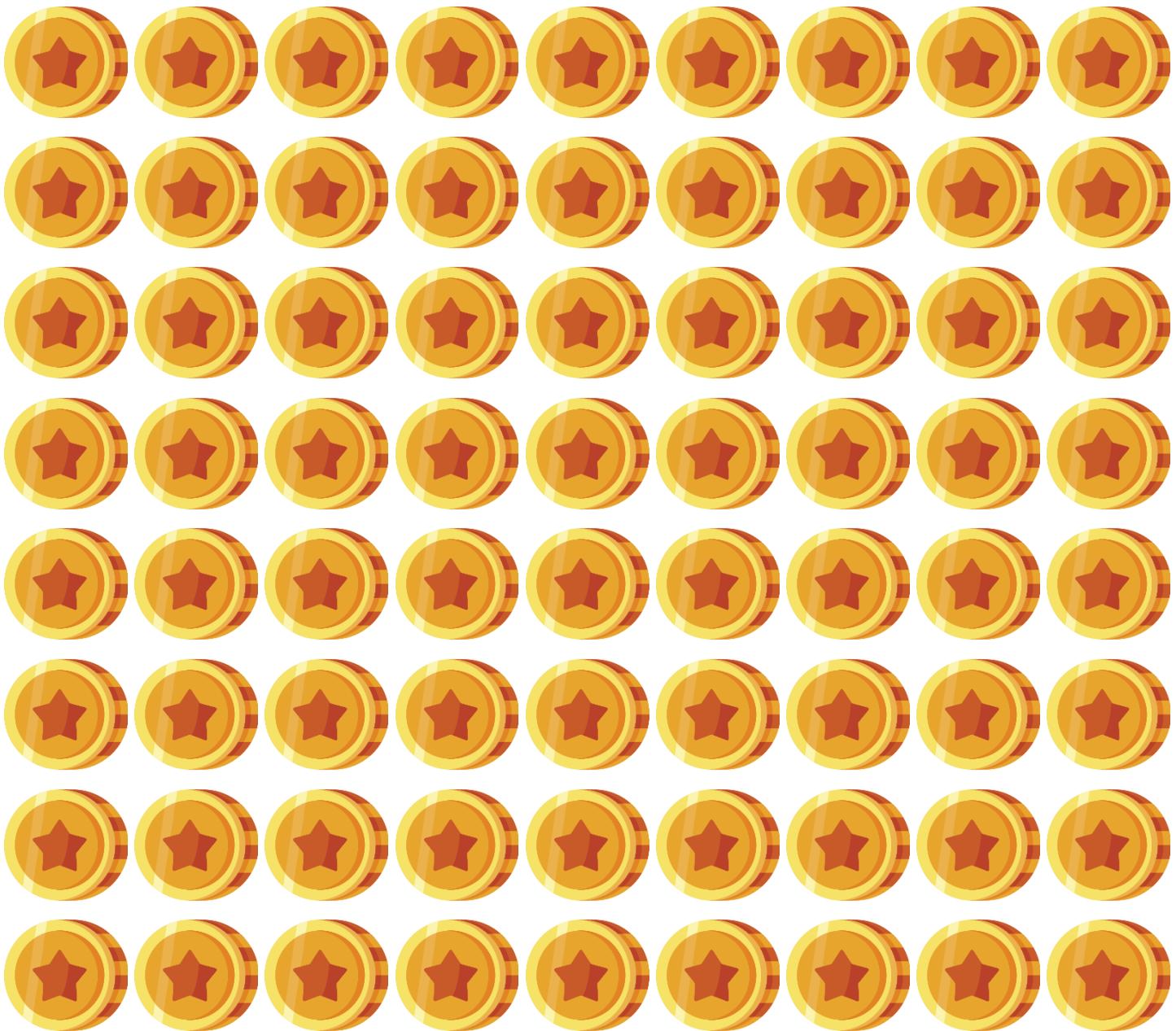
You can combine this game with the "Live in Harmony" quest available in the Unplugged game. In addition, to further practices computational thinking, you may wish to refer to other Unplugged quests, among which: *Likedislike, The perfect City etc.*



Printables

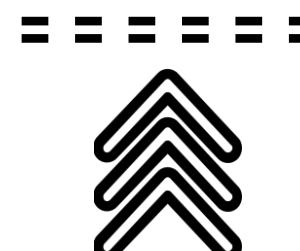
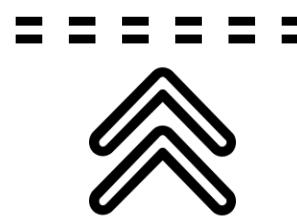
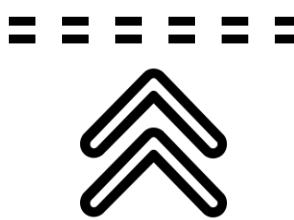
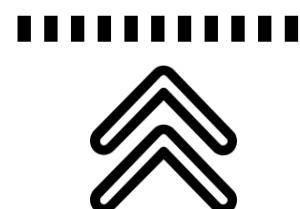
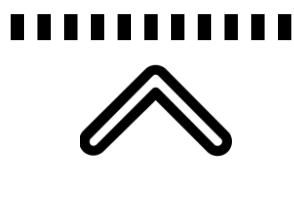
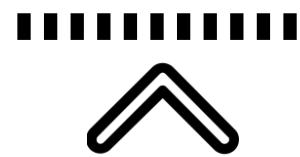
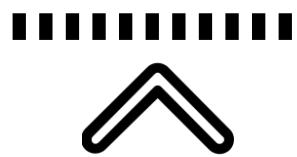
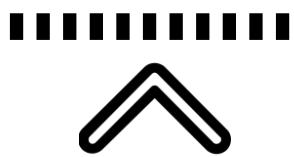


Points & Coins





Printables - Transport & priority



Printables - Transport & priority



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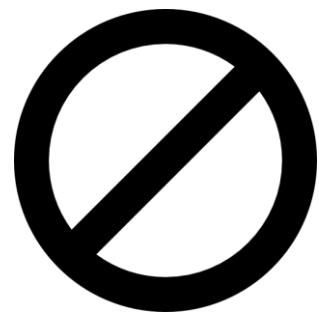




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