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Teacher's Guide: Creating Classroom Quests

Lillicorn

Teacher's Guide: Creating Classroom Quests with The Adventures of Lillicorn in WooWoo Land

Welcome to the Teacher's Guide to Classroom Quests with "The Adventures of Lillicorn in WooWoo Land". This guide was created to help educators working with young children (ages four to eight) to use the book within the classroom context. By using this to create "Classroom Quests", you will encourage your pupils to achieve several STEM objectives - as well as objectives for Key Stage One Computing for the British Curriculum – all within the context of play and storytelling. For more information, see the introduction of the book, *The Adventures of Lillicorn in WooWoo Land*.

Now, let's get started!

What is a Classroom Quest?

A Classroom Quest is a lesson based on a Quest from the book "The Adventures of Lillicorn in WooWoo land". The QuestFriendz book offers ten Quests for Lillicorn and her friends to solve which you can also do in the classroom. The first Quest begins of course by introducing the children to Lillicorn's story, by reading pages two to seven of the book. We suggest then offering each Classroom Quest as a separate lesson, starting each time with a recall of the previous Quest to reinforce the story's context for the children. You could offer one or multiple lessons in a week, in a series or within the context of a project, so that children will have time to consolidate the concepts in the book.

Each Classroom Quest includes:

- the use of the book as the children work collaboratively to solve challenging puzzles;
- optional use of the activity sheets for small group or individual work and
- engaging in group games to consolidate the new concept whilst creating positive experiences with STEM concepts in a social context.

For more suggestions on the length and structure of the lessons per age group, see the next sections.

How much time should I allow for a Classroom Quest?

Each Classroom Quest can last anywhere from thirty to sixty minutes. The time that you will spend on each Quest will vary depending on the age, concentration and ability of the children to work independently.

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We offer the following guidelines based on our experiences:

For the groups ages 4-5	+/- 30 minutes
For the groups ages 6-8	+/- 45 minutes
For the groups ages 7-8	+/- 60 minutes

Which materials will I need to do a Classroom Quests?

- The book "The Adventures of Lillicorn in WooWoo Land";
- Accompanying printable activity sheets and formatted cards which are found in the appendix;
- Coloured paper, LEGO or Duplo bricks.

What are the steps to create a Classroom Quest?

Step 1: **Recall exercise (5 minutes)**
Step 2: **Introducing the STEM Quest (5 - 10 minutes)**
Step 3: **Solving the Quest (10-15 minutes)**
Step 4: **Consolidating the new skills with the whole class (5-20 minutes)**

In the next section of this Teacher's Guide, we will give suggestions for completing each step of Classroom Quests and tips on how to encourage the children to use the kind of thinking they will need to solve the Quest.

Step 1:

Recall exercise: 5 minutes

The teacher can arrange the children in a circle so that they can all see the book.

Lessons begin with a short recall exercise: what do they know about this book already? What do they remember from the previous lesson? The teacher could use the book as visual support – what pictures and characters do they recognise? Do they remember what happened? Do they remember how they solved the puzzle? Have they solved another puzzle in the same way? Does it remind them of something they already know?

Step 2:

Introducing the STEM Quest: 5-10 minutes

The teacher reads the text belonging to the Quest. The teacher activates the children by "modelling" the kinds of thinking that the children will need to do in order to solve the quest.

For example, "Hmm, let's see: What do you think Lillicorn needs to do to complete this Quest? I wonder how we can go about that. What can we see already? Does that remind me of something I've seen before? If we do this – what do you think will happen then? Does anybody else have an idea?".

Children who quickly understand and can solve the challenge, could have the extra challenge of explaining their thinking to the others, or they could work individually (or in pairs) on the worksheets (Appendix 1 in this Teacher's Guide).

Step 3:

Solving the Quest: 10 minutes

Once it is clear that the children understand what they need to do to solve the puzzle, the children can work to solve the entire Quest in the group together, taking turns giving answers. If they are unable to solve the challenge on their own, you can help them by "thinking out loud" while you solve the Classroom Quest. Allow the children as often as possible to explain their thinking.

Step 4:

Consolidating the new skills: 10 – 20 minutes

Once the children have solved the Quest, there are a couple of options to help them achieve deeper understanding of the new concepts and practice the new STEM skills:

1) Handing out the activity sheets to be completed individually, in pairs or in small groups;
2) Playing a "group game" (see more information in the next section of this guide)
3) Handing out the activity sheets to be completed individually or in pairs and then reconvening in the group to play a "group game"
4) After solving the Quest together, the teacher could initiate first a "group game" and follow that up with individual/small group work on the activity sheets.

What are "Group games"?

"Group games" are games that are suitable to play in larger groups, as you might find in the classroom. In this Teacher's Guide, we have included the description of several group games as a part of the Classroom Quest which support the main concepts of the lesson. These games require minimal or no preparation and material.

Many of the games are quite active, which will appeal to most learners, and can be done out of doors or in a gymnasium. They are purposely open-ended to give teachers and children the opportunity to explore the STEM concepts within the social context of the classroom.

Descriptions of group games that we suggest can be found in the following section of this Teacher's Guide. New lesson

and game variations that you discover can be shared with other teachers via the “Lillicorn Community” website.

Descriptions of Group Games to accompany Classroom Quests with The Adventures of Lillicorn in Woo-Woo Land.

1. Dancing across the Rainbow Bridge

- **Related to:** Quest 1 and 9
- **STEM skills covered:** Pattern recognition.
- **Materials:** Multiple sheets of blue, red and yellow paper, large enough for all the children to see (add more colours of paper for additional challenge); printable Function Cards in Appendix 2.
- **Time:** 10- 20 minutes
- **Basic Game concept:** The pupils predict and create patterns using colours to create a dance. The game is Teacher-led in the beginning but can become student-led after they have played a few times.

The teacher collects sheets of coloured paper that are large enough for the whole class to see, such an A4. The colours red, yellow and blue are sufficient for the younger children for the first time. You can add more colours later.

Agree to the following rules with the children:

When your students see the colors:

Red = clap their hands

Yellow = arms above their heads

Blue = hands on their hips

Tip! You may want to support the children’s memory (and your own) by writing these down or making drawings where everyone can see which colour belongs with which movement.

The children practice with the first 3 colours: the teacher holds the sheet of coloured papier so that all the children can see it. The children must then perform the movement that is indicted by the colours.

Arrange the children in a circle or another form so that they can see how you lay the sheets of paper on the floor (or on a table) with enough room to move around. Depending on the age and ability of the children, the teacher can continue with one of the following variations.

Ages 4-5 (Teacher-led): Lay down 2 different colour sheets so that the children can see them. Ask the children to dance the "pattern" in the order that they "read" it (so if you have laid down a blue sheet and a red sheet, they will have to put their hands on their hips and clap their hands).

If the children are able to complete the dance indicated by the colours, the teacher can tell them "Hooray! You danced across the Rainbow Bridge!".

The game can be repeated with a different sequence of colours or the children can make dances for the class (Rainbow Bridges) with the coloured sheets of paper.

You could also add more colours, letting the children suggest new movements.

Ages 5-6 (Teacher-led): To keep the game challenging for older children, you can add more colours, for example:

Green = Turn around in a circle.

Orange = Jump in the air.

The children can also suggest new colours and movements to add.

Make a pattern now by first laying down a yellow sheet, then a blue sheet, then a yellow sheet.

Ask the children to dance first the pattern that they see (arms above their heads, hands on hips, arms above their heads).

Ask them what comes next in the pattern (blue= hand on hips). Ask them to explain how they know that blue is the next colour in the pattern.

Repeat this with different colours and patterns until you feel confident that they understand.

Then the children can take turns coming forward to lay down patterns of colour for the rest of the class to dance.

Ages 7-8 (Student-led): Once the children understand the premise of dancing across the Rainbow Bridge using different colours, they can work in groups of 4 to make their own dances and patterns using the colours. The groups could take turns presenting their dances and the other groups could make a "Rainbow Bridge" with a sequence of colours which the other children must dance in order to the cross the bridge safely.

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Another option is to use the Function Cards, Appendix 2, which introduces the options of repeating sequences (Loop); adding the amount of repetition per movement (with Repetition cards and numbers) and adjusting the speed of the movements (2x fast and slow motion). Let the children think of other new cards, like adding sounds and other effects.

2. Wake up Mr Waddles/Building Mr Waddles House

- **Related to:** Quest 7
- **STEM skills covered:** spatial recognition
- **Material**: none for the youngest children; for the older children: identical sets of +/- 10 Lego/Duplo/ wooden blocks
- **Time:** 5 – 20 minutes
- **Basic game concept:** The children carry out tasks based on spatial information.

Ages 4-5: Help children create a "human obstacle course" outdoors, where they have to navigate over, around, and between their friends.

For example, Child One begins by making a shape with their body., for example arms and legs spread apart, like a star; bent over like a bridge or curled up like a ball. The teacher then discusses with the other children if they can best go under, over, around or through the shape of child one to go past. Several children can be placed after each other in order to form an "obstacle course" which the other children must navigate to get through to the other side and wake up Mr. Waddles.

The focus of the game is to allow the children the opportunity to consolidate the words and actions associated with spatial positioning.

Ages 6-7: Building Mr Waddles house Materials: identical sets of +/- Lego pieces or blocks (the children can prepare this ahead of time); a large cardboard box or screen so that they cannot see each other's work.

The children work in groups of two. Child One builds a small structure with the blocks pieces. Child Two cannot see what the first child has built. Child One gives verbal instruction regarding the placement of the blocks to Child Two, such as "the red block is on the bottom, the yellow block goes on top and the other yellow block goes next to the red block". Child Two will try to build an identical structure with his/ her own blocks based on the instruction from the first child.

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The description of how the blocks relate to each other in space will determine how quickly or successfully the second structure will be built identical to the first.

This is a cooperative game, wherein the children must work together in order to accomplish their goal (in this case, two identical houses for Mr. Waddles). The more they play, the better they will become in analysing the building, listening to each and asking clarifying questions.

Ages 7-8: Building Mr Waddles house. It is possible that the variation for the 6-7 year children is sufficiently challenging for your older students.

However, you can raise the level of abstraction of this game by asking the students to create instructions to build their house. You will need to explain that this is not a drawing of their version of Mr. Waddles house, but the instruction on how to build it. They will accomplish this on paper, for example, by drawing coloured blocks and indicating their position with arrows, such as one might write a computer program for a robot.

This variation is quite advanced, but will appeal to children who enjoy being creative about finding solutions. There are many good ways to create instructions on paper. You could draw some examples, like an arrow pointing down and a blue block could be the base of the structure. A red block and a cross symbol could indicate the positioning of a red block on top of the blue block.

Alternatively, for the children who find this very difficult, they could draw the building from different angles: from the side or from the top, to practice spatial recognition.

3. Help Lillicorn find the blackberry

- **Related to:** Quest 2 and 8
- **STEM skills covered:** structured problem solving, trial and error
- **Material:** the 25 Lillicorn cards/carpet squares + start card; command cards, Snappette cards (for the oldest children) and one blackberry card (all cards are downloadable from Appendix 3 of this Teacher's Guide)
- **Time:** 10-20 minutes
- **Basic game concept:** One child hides the blackberry card and shows a second child where to find it using "command cards".

TIP: this game can be played in a gymnasium or outside.

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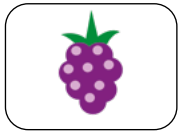
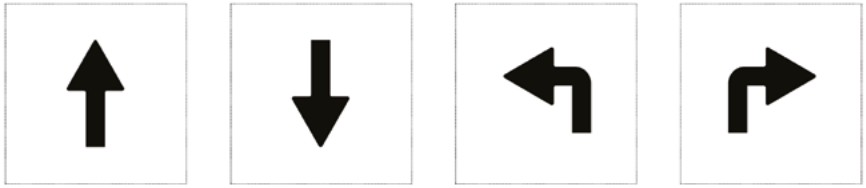
All ages: To start this game, the 25 identical Lillicorn cards/ carpet squares + start card are laid out on the floor in the pattern shown below.

Child One closes his/her eyes or leaves the room. Child Two hides the card with the picture of the blackberry under one of the Lillicorn cards/carpet squares so that it cannot be seen.



Child Two "writes" the directions (algorithm) to find the blackberry card, with the help from the teacher - or the other students - using the set of command cards. Each command card. with a straight arrow represents one step or the distance from one card to another and curved arrows indicate a change of direction. Child Two lays out, in a row, the command cards to indicate how student one must move from the start card in order to find the blackberry.



Then Child One opens his/her eyes or returns to the room and, beginning at the "start" card" tries to find the blackberry by following the steps indicated in the correct order on the command cards.

Ages 6-7: For the older children, the teacher can increase the challenge by using "Snapette cards", which create obstacles that the path may not cross. This works as follows:

Variation 1: The teacher lays out "Snappette" cards on top of a few of the Lillicorn cards/carpet squares so that the child

writing the directions must create a path without crossing the Snappette cards.

Variation 2: Once Child Two has written the directions (algorithm) to find the blackberry with the command cards and Child One has found the blackberry, the teacher can lay down a few Snappette cards that will block the way. Now the children can work together to "debug" the directions by writing a path that will bring Child One to the blackberry without crossing a Snappette card.

Ages 7-8: The children work in groups of maximal 4, 2 children hide the blackberry card and write the directions (algorithm) to find the blackberry with the command cards and 2 children find the blackberry by following the command cards. One child could take the role of placing the Snappette cards to keep the game exciting.

4. Find Lady Blacksmith's house(guest)

- **Related to:** Quest 6
- **STEM skills covered:** Structured problem solving, problem identification
- **Materials:** Appendix 4, on the digital schoolboard: the illustration of the 3 houses from Quest 6
- **Time:** 5- 10 minutes
- **Basic game concept:** The children use their logical reasoning to solve the problem of finding Lady Blacksmith's house. Similar to "20 questions".

Ages 4-5: This game is played using Quest 6 in the book, with the illustration of the three houses. The teacher explains that he/she has learned that Lady Blacksmith has moved but still lives in one of the three houses in the picture on Quest 6.

The teacher reveals one detail of the house at a time and the children must guess which house she is describing: my new house has a round window, my new house is red, my new house doesn't have a chimney. The children raise their hand when they know which house she is describing and, when it is their turn, point it out on the page.

Ages 6-7: The teacher explains that he/she has learned that Lady Blacksmith has moved but still lives in one of the three houses in the picture on Quest 6. The children must ask questions to determine in which house she lives now (Does the house have chimney? Does the house have entrance stairs?).

Ages 7-8: The teacher explains that Lady Blacksmith has a houseguest and the children must guess who it is by asking solely "yes" and "no" questions (Is it a man? Is he alive? Is it a real person? Etc). The houseguest can be a character from

the book, The Adventures of Lillicorn in WooWoo Land, but you can also agree to let the children choose from anyone in the world, as long as everyone in the class knows who it is. To make the game more difficult, the children have to guess the houseguest in 20 questions or less. The children can take turns choosing who the houseguest of Lady Blacksmith is.

Using these materials and games we hope to ignite the curiosity of your students and an enthusiasm for STEM subjects from a young age.

We wish you and your students many exciting Classroom Quests with help of this Teacher's Guide and The Adventures of Lillicorn in WooWoo Land!

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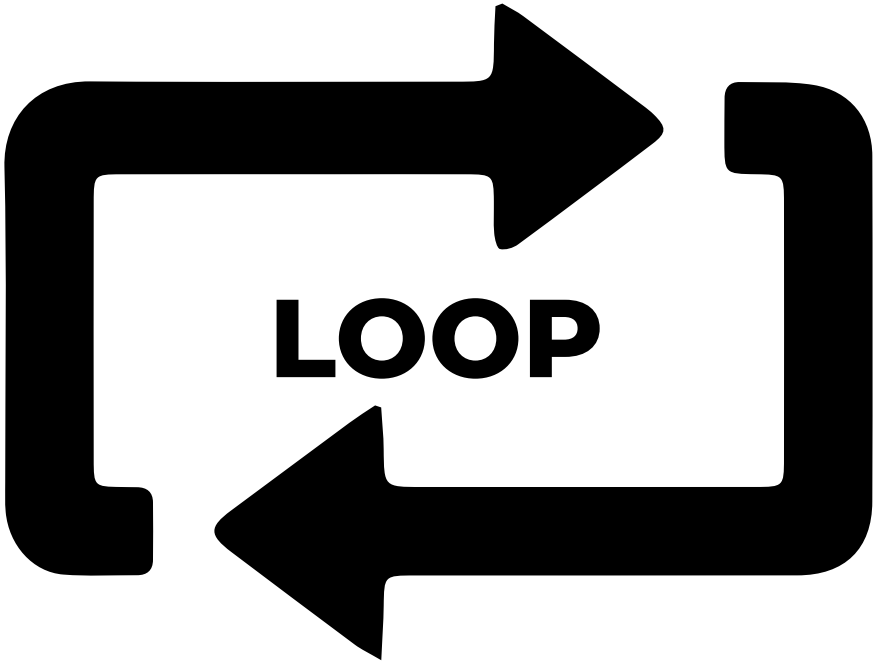
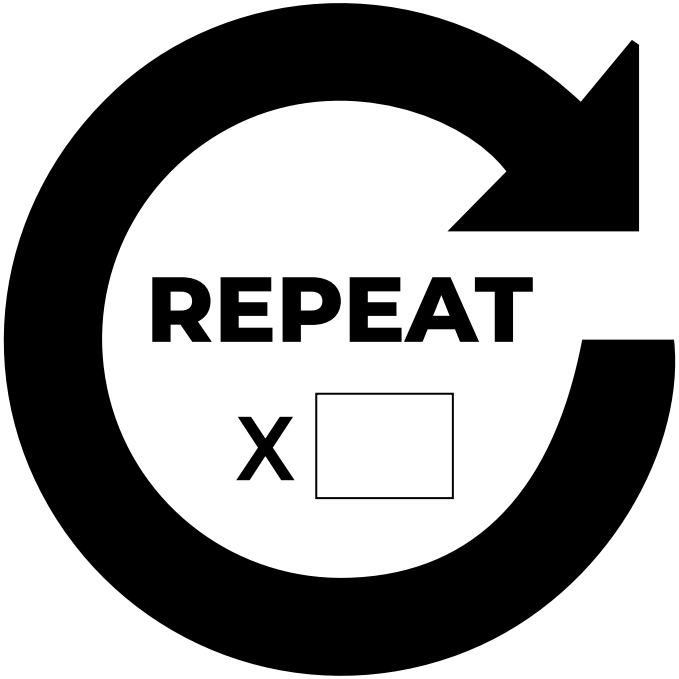
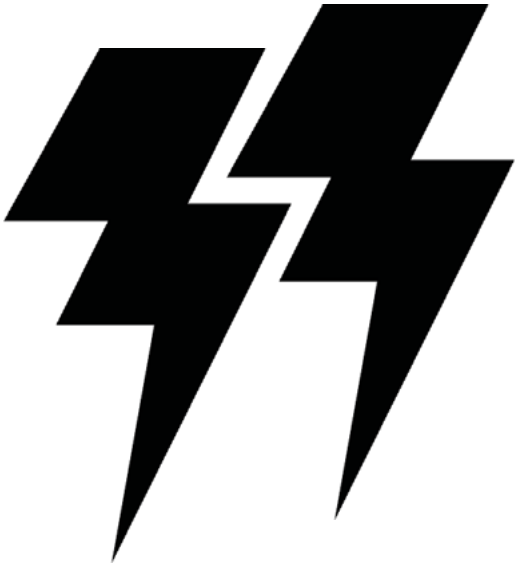
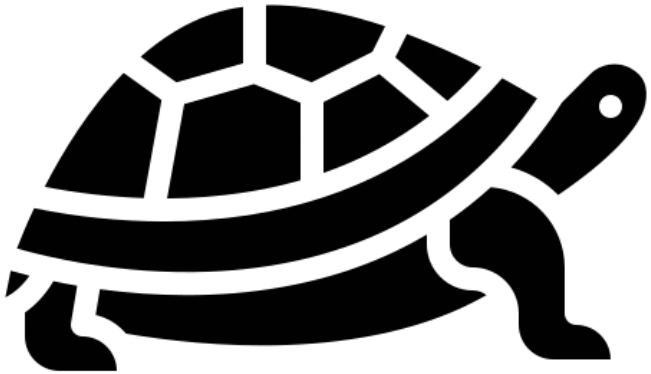


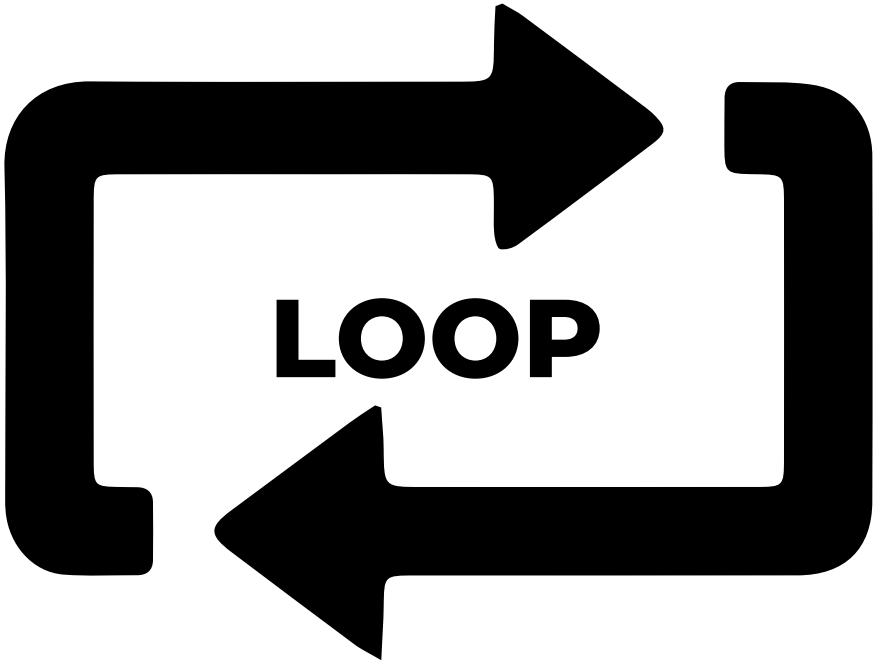


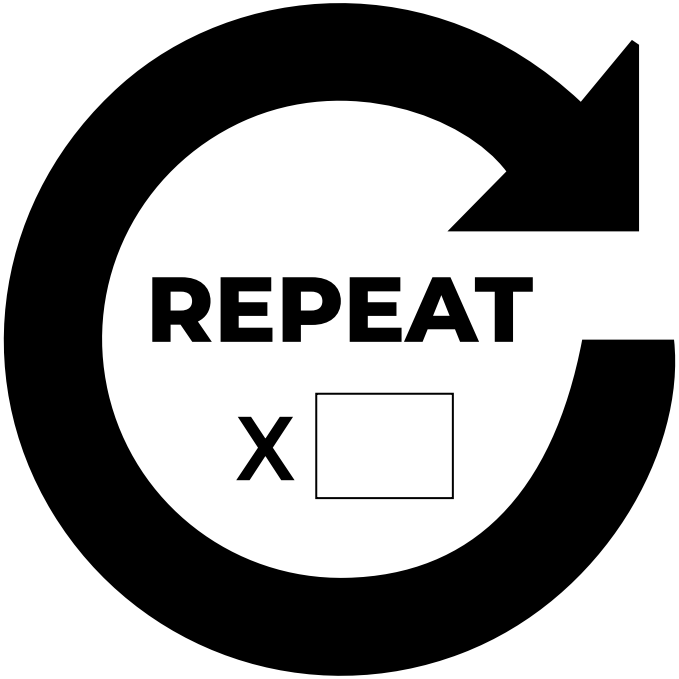
2x Fast



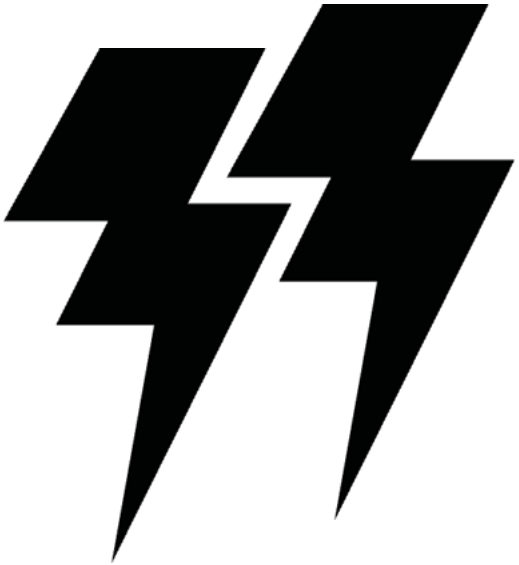
Slow Motion



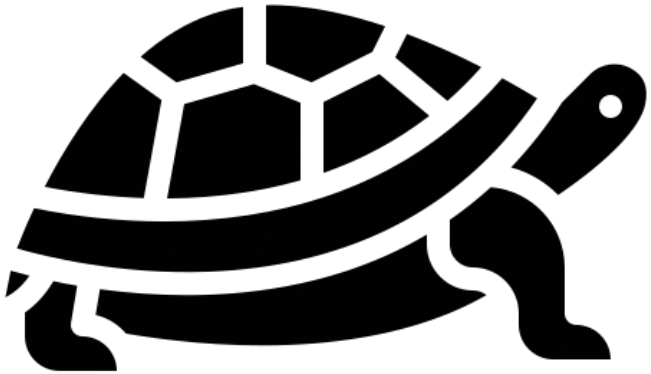




2x Fast



Slow Motion

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Start