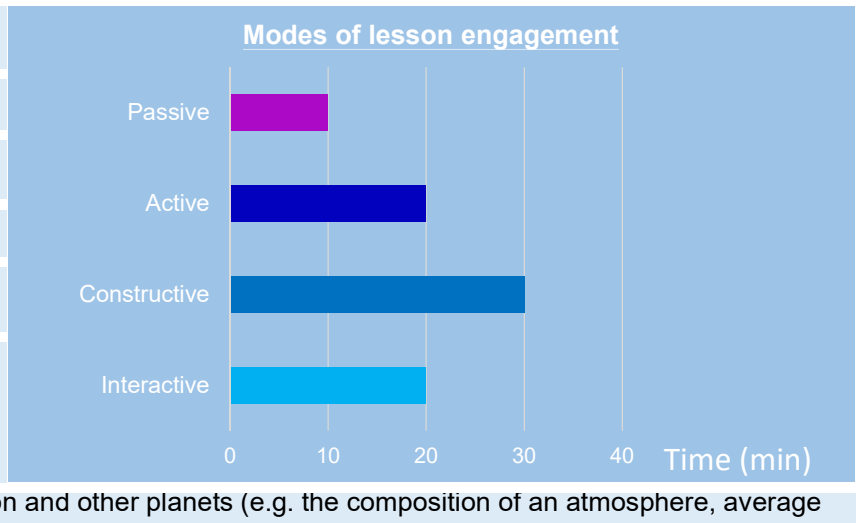
Science (S1-3) - Lesson Design & Evaluation Tool (Trial version)

School :	ABC college
Level :	S2
Class :	2A
Expected time :	80 minutes
Unit :	Earth_and_Space
Content Area :	5.3. Space exploration - physical features of planets in the solar system - space exploration programmes by our country
Learning Outcome 1 :	- compare physical features of the Earth, the Moon and other planets (e.g. the composition of an atmosphere, average surface temperature, presence of water, mass, gravity, distance from the Sun, the period of revolution and rotation, and the potential conditions to support life)
Learning Outcome 2 :	---
Learning Outcome 3 :	---



	Characteristics of engagement mode	L&T Activitiy to be Conducted	Time (min)
Passive	The activity requires the student to watch a teacher led demonstration or listen to a lecture about the activity. There is no selection of materials or creative production. Individual student does not create anything that is not already present in the learning materials. If a procedure is involved, the procedure is rigid and will result in a predetermined outcome. Examples of action verb of the task: Listen, Look, Read, Observe	☑ Ask students listen to teacher explains new science content ☐ Ask students watch teacher demonstrates an experiment or investigation ☑ Ask students read science textbooks or other resource materials ☐ Other: _____	10
Active	The activity involves the student performing physical manipulations, usually following a fixed procedure. Individual student may engage in a selection process, whereby they choose from multiple content, for example, among various procedures, data, or ways of presentation. Examples of action verb of the task: Annotate, Calculate, Categorise, Choose, Circle, Complete, Cross out, Describe, Fill in, Find, Follow the procedures, Identify, Label, List, Match, Measure, Record	☐ Ask students describe the natural phenomena observed ☐ Ask students use scientific formulas and laws to calculate routine problems under guidance ☐ Ask students conduct experiments (hands-on or virtually) according to step-by-step instructions ☑ Ask students use computational models, simulations and other tools to generate data according to step-by-step instructions ☐ Other: _____	20
Constructive	The activity requires the student to generate new ideas beyond what the materials provide. For example, if the learning activity involves generating a way of representing data and no examples of representing data are presented in the learning materials. Individual student would generate something new, that is something beyond what was provided in the learning materials. This could include, for example, a new idea, procedure, or way of representing data. Examples of action verb of the task: Ask questions, Build, Comment, Compare, Connect, Construct, Create, Decide, Determine, Draw, Explain, Generate, Justify, Predict, Sketch, Solve, Suggest, Summarise	☐ Ask students ask authentic questions about scientific phenomena ☐ Ask students predict the outcomes of experiments or investigations ☐ Ask students formulate hypotheses based on observed phenomenon or provided information ☐ Ask students use multiple sources of evidence / scientific concepts to explain scientific phenomena ☑ Ask students create representations (e.g., models, graphs) to explain scientific phenomena ☑ Ask students propose multiple / different / original solution to a scientific problem ☑ Ask students draw conclusions from data to support or refute the hypothesis set ☐ Other: _____	30
Interactive	The activity requires more than one student to generate new ideas beyond what the learning materials provide. Two or more students engage in an intrinsically co-constructive activity, including substantial dialoguing rather than parallel monologues, to generate knowledge based on students' interaction. Examples of action verb of the task: Build upon, Discuss, Elaborate, Evaluate, Revise, Work in groups	☑ Ask students discuss and propose an original improvement to an experiment or investigation ☑ Ask students argue about science questions and summarise by providing supporting and refuting arguments ☑ Ask studenets evaluate the quality of the output from computational models, simulations and other tools and sugguest further revisions, if any ☐ Other: _____	20