Cambridge International School, Mohal, Kullu
Class –VII
Subject- Mathematics
First Term Curriculum
Session – 2020-21

	FEBRUARY/MARCH	APRIL	MAY	JUNE
Concepts	• Integers • Fractions and Decimals	• Data Handling • Symmetry	• Symmetry (continued) • Visualizing solid shapes	• Simple equation • Comparing Quantities
Learning Outcomes	• After the end of this chapter students will be able to: • define 'integers' • distinguish integers from other types of numbers • order integers from least to greatest and greatest to least **Activity:** • **Teaching integer multiplication with cards. (Kids will have three cards black representing a positive integer and red a negative integer. Kids will operate and find results according to the cards dealt. The fastest kid wins.)** • After the end of this chapter students will be able to: • identify types of fractions • compare and contrast different types of fractions • represent fractions on a number line **Activity:** • **Jodo Gyan Kit (Students will use jodo kit to make shapes and use shapes in intuitive ways to add up as fractions.)**	• After the end of this chapter students will be able to: • Define data management • Discuss why data management is important to organizations • Links of video used • https://youtu.be/6DYtC7lrVuY • **Activity** : • **Household water consumption records** (Students will collect data of how much water is used in their homes and make bar graph to find total consumption.) • After the end of this chapter students will be able to • name and recognize the three different types of symmetry: reflection, rotational, and point • identify a shape's line of symmetry • identify a shape's order of rotation • Links of video used • https://youtu.be/s4tS-ZmpJfw **Activity**: • **To observe rotational symmetry and order of rotation. (Students will create two same figures of same dimensions and overlap one over the other. Keeping the bottom one fixed, student will rotate the figure lying on top. At whichever angle the bottom figure coincides with top figure. That angle of rotational symmetry it would have and how many times it coincides will give us order of rotation.)**	• After the end of this chapter students will be able to: • identify solid figures. • name solid figures according to their properties. • name solid figures in the environment. **Activity:** ➢ **Shadow play.(Students will use a dark room for this game where they would shine light on 3D objects and see what shape it creates as a shadow. They will analyze the shadow and see whether the shape remains 3D or not and also will the shadow be same as 3D object)**	• After the end of this chapter students will be able to • Define what a variable. • Solve equations and deduce values of variable. • Find out result when quantity is unknown. Videos to be used https://youtu.be/O65fxp7DKMc **Activity:** ➢ **Find out family members age.(Students as they know their own age will ask their parents and grandparents what their age is but the parents won't tell the exact number rather they would tell it as statement(for eg. A parent can say to his/her kid that I am thrice as old as you plus two what could be my age) and the student has to figure it out. Same thing can be repeated with all family members.** • After the end of this chapter students will be able to • Define the ratio between quantities. • Utilize percentage to compare quantities. • Learning to compare to similar quantities and to find relation between them • Links of video to be used • https://youtu.be/B4_T6-rc35Y • **Activity:** ➢ **Compare and finding relation between tallest member of your family and you.(Students will measure their own height and height of other people in the family and find the ratio between their heights.)**
Assessment	• Online Assessment • Online assignment • Project work/ Activity • Homework updates **Main Book: NCERT**			

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Final Term Curriculum
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	JULY/AUGUST	SEPTEMBER	OCTOBER	NOVEMBER
Concepts	• Rational Numbers • Practical Geometry	• Perimeter and Area • Algebraic Expressions	• Lines and angles • Triangles and it's properties	• Congruence of triangles • Exponents and powers
Learning Outcomes	• After this lesson, students will be able to: • define 'rational number' • demonstrate the ability to order and compare rational numbers • Links of video to be used • https://youtu.be/SQ4cB9yXkHM **Activity**: Since there are lots of rules for students to know about what makes a number rational or irrational, we need to find ways to make it easier for students to remember them. One possible way to do this is to have students to create a poster summarizing those rules in an understandable and clear way. Students will be encouraged to be as creative as possible in designing their posters. After this lesson, students will be able to: • Draw angles using compass and ruler. • Construct	Upon completion of this lesson, students will be able to: • define 'perimeter' • define 'area' • list the formulas for finding perimeter and area of different shapes • determine perimeter and area of assorted shapes • Links of video to be used • https://youtu.be/awUUQAISrxg • https://youtu.be/P7DB2fW1vWU **Activity**: • **Cost of cementing the floor of your room at home. (Students will calculate the area of their bedroom floor and than calculate the cost it would take to floor their own rooms.)** Upon completion of this lesson, students will be able to: • give examples of different types of algebraic expressions • distinguish between different types of algebraic expressions • Links of video to	• Students will learn various types of lines and angles and be able to recognize them in the natural world. • Links of video to be used • https://youtu.be/6RMN5Pf1fHU • **Activity**: **Name the angles (Students will be given shapes of various angles and they would have to identify the angles being created and name them)** • **After completing this chapter students will be able to** • Define medians of a triangle • Explain altitudes of a triangle • Exterior angle of a triangle and its property • Angle sum property of a triangle • Links of video to be used • https://youtu.be/EZ6dOlRQDBo **Activity:** • **Project on angles** Find unknown angle of a	After this lesson, students will be able to: • Explain congruency in triangles • Use the SSS, SAS, and ASA postulates to check triangles for congruency • Links of video to be used • https://youtu.be/Ie3j2MDuuA0 **Activity**: • **Use of congruence criterions to identify pair of congruent triangles.(https://youtu.be/qe9B2QxAbcU This video will be shown to kids which would help them understand the activity)** After this lesson, students will be able to: • define key terms in relation to exponents • explain the rules that govern exponents • demonstrate understanding of exponents in written and oral work • Links of video to be used • https://youtu.be/WwHyPoqUQec • https://youtu.be/JX

	triangles using compass and ruler. ● Links of video to be used https://youtu.be/CrIdJKo0whs **Activity**: ● **Paper folding to draw a parallel line(Students will take a sheet of paper make a fold. This fold represents a line l. Unfold the paper. Mark a point A on the paper outside l. Fold that paper perpendicular to the line such that this perpendicular passes through A. Name the perpendicular AN. Make a fold perpendicular to this perpendicular through the point A. Name the new perpendicular line as m. Now m is parallel to l. Do you see why?. Which property or properties of parallel lines can help you to say that line l and m are parallel.**	be used ● https://youtu.be/5Q0FlxcEEIw . **Activity**: ➢ **Pattern with matchstick** **(Take (small) line segments of equal length such as matchsticks, tooth pricks or pieces of straws cut into smaller pieces of equal length. It consists of repetitions of the shape made from 4 line segments. As you need 4 segments to make square, for two shapes 7, for three 10 and so on. If n is the number of shapes, then the number of segments required to form n shapes is given by (3n + 1).** **You may verify this by taking n = 1, 2, 3, 4, ..., 10, ... etc. For example, if the number of shapes formed is 3, then the number of line segments required is 3 × 3 + 1 = 9 + 1 = 10** **Here the shape is repeated. The number of segments required to form 1, 2, 3, 4, ... shapes are 3, 5, 7, 9, ... respectively. If n stands for the shapes formed, the number of segments required is given by the expression (2n + 1). You may check if the expression is correct by taking any value of n, say n = 4.** **Then (2n + 1) = (2 × 4) + 1 = 9, which is indeed the number of line segments required to make 4 s.**	triangle when its two angles are known. Kids will make figure where they would have magnitude of a one of the quantities unknown and they would have to figure out that unknown quantity.	mASAciIog **Activity** : ● **Exponents game(https://www.meritnation.com/cbse-class-7/math/math/exponents-and-powers/activities/9_1_3_43** ● **Students will be asked to go to this website. Here they would have various activity test for exponents each kid will be given different activity. They will have to finish it in allotted time.)**

Assessment	● Online assignment and assessment ● Project work/ Activity **Main Book: NCERT**