YEAR 13 Batch 1 & 2 - BIOLOGY

WEEK 3 (13th Sept - 17th Sept.)

Work sent to students through Class Bio Whats App Group /Google Classroom

Topic 7.2:- Factors affecting Gene Expression

L.O – Explain how gene expression can be changed by epigenetic modification, including non-coding RNA, histone modification and DNA methylation that leads to diseases in humans . Role of homeobox genes favouring development in organisms and epistasis & x chromosome inactivation in coat coloration in animals .

Biology Students Book 2

B1- Monday – 1st Period (Zoom) **B2 - Sunday – 6th Period (Zoom)**	**Students able to** ●Define epigenetics ●Identify the role of DNA methylation/Acetylation & histone modification that leads to various forms of cancers in human **Students to research on** Moulting in insects & cause of bowel cancer, lung cancer & breast cancer **Resources:** A2 Board works ,PowerPoint & Video link https://www.youtube.com/watch?v=JMT6oRYgkTk
B1 - Monday –2nd Period (Zoom) **B2 - Sunday – 7th Period (Zoom)**	**Students able to** ●Correlate gene expression to growth & development in organisms – Homeobox genes . ●Role of DNA methylation/Acetylation , histone modification & non coding RNA in conversion of foetal haemoglobin to adult haemoglobin . **Students to research on** Coat coloration in animals- epistasis & X chromosome inactivation **Resources:** A2 Board works ,PowerPoint & Video link **https://www.youtube.com/watch?v=1Ecm8UgiXBU**
B1 -Tuesday – 4th Period (Zoom) **B2 - Monday– 3rd Period (Zoom)**	**Students able to** ●Describe how X chromosome inactivation is linked to formation of Calico cats ●Explain how epistasis leads to coat coloration in mice. Role of environment in coat color of Siamese cat **Students to complete worksheet on** Transcription factors, RNA splicing & epigenetics **Resources:** A2 Board works ,PowerPoint & Video link https://www.youtube.com/watch?v=Y9vXhmI5FXM **https://www.youtube.com/watch?v=IPs-pP2JuPY**

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Work sent through Google classroom/G mail/Online Quiz/ZOOM Learning Platform

Topic: 8.1,4 and 8.1,5 ,8,1.6 Genetics

L.O- Inheritance of two non-interacting unlinked genes. Autosomal linkage. Sex linkage on the X chromosome .Construct genetic crosses and pedigree diagrams.

Biology students text book 2

B1 -Tuesday- 5th period **B2 - Sunday- zero period**	**ZOOM SESSION** **BOARD WORKS –[Inheritance -No-3-20]** **Video and PPT: ,Sex linkage and Unlinked genes** :www.science.co.uk/biology/genetics.html, www.internet4classrooms.com **Text Book Page Numbers – 146-149** **Worksheet – Genetics** **Students able to:** Give reasons why are genetic pedigree diagrams so useful in human genetics? Y chromosome and X chromosome carry similar genes and similar numbers of genes ? Why there is no Y linked disorders. If yes then give examples.
B1 - Thursday-1st & 2nd **Period** **B2 - Monday - 8th period** **B2 - Thursday- 7th period** **ZOOM SESSION**	**BOARD WORKS –[Inheritance -No-3-20]** **Video and PPT: : Autosomal linkage and Chromosome mapping** **:**www.science.co.uk/biology/genetics.html, www.internet4classrooms.com An interactive *Drosophila* breeding activity to show linkage can be found at www.kscience.co.uk. Click on 'Animations' then scroll down to the activity on *Drosophila* linkage. Animations and problems on haemophilia and sex linkage are available online. Try searching for 'DNA from the beginning' **Text Book Page Numbers – 150-156** **Worksheet – Genetics** **Students able to:** Draw genetic diagrams to solve problems involving sex linkage and autosomal linkage **Describe** chromosome mapping.**Predict** the results of autosomal linkage diagrams.