Y11 - 10 week provision plan to maximise achievement
Class teacher Mr Hill Class: 11M7 Biology

Week	Lesson content (Knowledge & skills)	Content to cover	HW and Revision	Assessment	Intervention
1	Inheritance EOTT & GPA	Reteach from GPA	Targeted from GPA	EOTT	Reteach in GPA Lesson
2	Homeostasis 1: • Purpose of homeostasis • CNS	**L1:** Conditions inside the body need to be kept **steady**, even when **external environment changes. Homeostasis** is the regulation of conditions inside the body (and cells) to **maintain** a **stable internal environment** in response to changes to the internal and external environment. There are three main components to controlling **blood glucose level, body temperature** and **water content**: **receptors, coordination centre (**including **brain, spinal cord** and **pancreas)** and **effectors.** **L2:** Organisms need to respond to **stimuli** to **survive.** In **vertebrates** (animals with a backbone) the **central nervous system** (CNS) contains the **brain** and **spinal cord.** In mammals it is connected to the body by **sensory** and **motor neurons.** Sensory neurons carry information as **electrical impulses** from the receptors to the CNS. Motor neurons carry electrical impulses from the CNS to effectors. Effectors can be a **muscle** or **gland,** they respond to nervous impulses. **Receptors** are cells that **detect stimuli**. There are taste receptors on the tongue and sound receptors in the ear. Effectors respond to nervous impulses and bring about a change. **Muscles contract** in response and **glands release hormones.** The connection between neurons is called a **synapse.** Nerve signals are transferred by **chemical** which **diffuse** across the gap. They set off a **new electrical signal** in the next **neurone.**	Seneca vision - Microscopes		Video links sent via email

3	Homeostasis 2: • Reflexes • Ruler Drop Test RP	**L3:** Reflexes are **rapid** and **automatic responses** that don't involve the **conscious** part of the **brain**. They **reduce** the chances of being **injured.** The passage of information in a reflex is called a **reflex arc.** Neurons in a reflex arc go through the **spinal cord.**. As the response is **not thought about** (which takes time) this is a **quicker response.** **L4: Caffeine** is a **drug** that **speeds up** a person's **reaction time.** The person being tested should **sit** with their **dominant arm resting** on the **edge** of a **table**. A **ruler** should be held **vertically** between the **thumb** and **forefinger.** The **zero** end must be **level** with their thumb and forefinger. The ruler is **let go** of with **no warning.** The ruler should be **caught** as **quickly** as possible. Reaction time is measured by the **number** on the **ruler** where it is **caught.** The **further down** it's caught (the higher the number) the **slower** the **reaction time**. The person can be tested before and after consuming **caffeine**. There should be **at least ten repeats. Conversion tables** are used to convert the number on the ruler to a time. **Control variables** are people staying in the same roles, using the same hand, the ruler is to be dropped from the same height and the person being tested should not have had any caffeine previously. Too much caffeine can cause **unpleasant side effects** so more caffeine should not be drunk for the rest of the day. **Computer tests** can also be used to measure reaction time. They can give more **precise** reaction time because they **remove human error** and as it is recorded in **milliseconds** it is also more **accurate**. It also removes the possibility of a person **anticipating** when the ruler will be dropped by reading **body language.**	Seneca vision - Cells		Video links sent via email

4	Homeostasis 3: • Hormones – Adrenalin • Hormones – Insulin	**L5:** Hormones are **chemical molecules** released directly into the **blood**. They are carried all over the body in the **bloodstream** and only affect **particular cells** in particular organs (**target organs**). Hormones control things in organs and cells that need constant adjustment. **Adrenal glands** (above the kidneys) produce **adrenaline** which is used to prepare the body for **fight or flight.** The **pancreas** produces **insulin** which is used to **regulate blood glucose levels** **L6: Diabetes** is a condition that affects the ability to control blood sugar levels, there are **two types**. **Type 1** is where the pancreas produces **little or no insulin**, blood glucose can rise to a level that can **kill.** These people need **insulin therapy** which usually involves **injections** of **insulin** throughout the day, most likely at meal-times. **Type 2** diabetes is when a person has become **resistant** to their **own insulin** and again, insulin levels rise to a dangerously high level. Being **overweight** increases the chance of developing Type 2 as **obesity** if a **major risk factor**. It can be controlled by eating a **carbohydrate-controlled diet** and taking **regular exercise.**	Seneca vision – Food Tests		Video links sent via email
5	Homeostasis 4: • Hormones – Oestrogen • Hormones - Testosterone	**L7: Ovaries** (females only) produce **oestrogen** which is involved in the **menstrual cycle.** **Testes** (male only) produce **testosterone** which controls **puberty** and **sperm production**. Nerves have **very fast action, act** for a **very short time** and act on a **precise area**. Hormones have **slower action, act** for a **long time** and act in a **general way.** L8: Menstruation is a **28-day** cycle and has **four stages**. Day 1 (and Stage 1), menstruation starts, and the **uterus lining breaks down** for about **four days.** From day 4 to 14 (Stage 2) the lining of the u**terus builds up** again, it is a **thick spongy layer** full of blood vessels which is ready to receive a **fertilised egg**. Stage 3 is when an egg has developed and is released from the ovary at day 14, this is **ovulation**. Until day 28 (Stage 4) the **uterus wall** is **maintained.** If no fertilised egg has landed then the spongy layer starts to break down and the whole cycle begins again.	Seneca vision – Photosynthesis RP	EOTT	Reteach in GPA Lesson Video links sent via email

6	Revision: Paper 1	B1: Animal and Plant Cells B1: Specialised Cells B1: Mitosis	Seneca vision – Reaction Time RP		Video links sent via email
7	Revision: Paper 1	B2: Cell organisation B2: Enzymes & Digestive System			Video links sent via email
8	Revision: Paper 1	B2: Circulatory System – Heart and Blood vessels B2: CVD			Video links sent via email
9	Revision: Paper 1	B2: Plant cells & Leaf structure B4: Photosynthesis			Video links sent via email
10	Revision: Paper 1	B3: Communicable disease B3: Bacterial disease & Antibiotics Viral disease & Vaccines			Video links sent via email