AE American School of Dubai (ASD): Food Design & Experiential Learning

🌱 The Food Design Program at ASD

This segment showcases how the **American School of Dubai (ASD)** uses a whole-school **food design program** to teach sustainability, science, culture and life skills through hands-on experiences from age 3 to 18.

- ASD has invested in a dedicated **Food Design teacher** who works with students from **Pre-K (3-year-olds) through Grade 12**.
- Learning happens in three main spaces:
    - A **sustainable school garden**, where **every plant is planted by students**.
    - A **teaching kitchen** used by all grades to cook, experiment and even dye fabrics.
    - An **on-campus apiary** (bee hives) that second, sixth, and ninth graders visit as part of their learning on ecosystems, pollination, and sustainability.
- The philosophy is: **“Include all, engage all, inspire all, nurture all”** by getting students out of the classroom, “dirty” in the garden, cooking in the kitchen, and interacting with bees, soil and experts.
- The school also runs a **community compost program**, where students are responsible for maintaining the compost that feeds the garden, closing the loop between food scraps and soil.

🍽️ “Seed to Table” – Week Without Walls (Grade 7–8)

- During the 24h for Change segment, ASD is in the middle of its **Week Without Walls** experience called **“Seed to Table”** for 7th and 8th graders.
- Students spend the week almost entirely outside conventional classrooms.
- They are organized into three symbolic teams:
    - **Seeds** – beginning, potential and the origin of food.
    - **Leaves** – growth, nurturing and sustainability.
    - **Community Table** – sharing meals, celebration and community.

- Throughout the week, students participate in a sequence of immersive experiences designed around **experiential learning, sustainability and food systems**.

👨‍🍳 Day 1 – Michelin-Level Cooking & Creativity

- Students work with **Chef Magnus** from **Food Nation**, a UAE-based organization that promotes sustainable food systems and plant-rich diets.
- Chef Magnus runs a **garden-to-kitchen workshop**:
    - Students harvest ingredients (e.g. herbs) and transform them in the kitchen.
    - They prepare components like **basil oil** and **vinaigrettes**, thinking about how flavors combine in each bite.
- **He emphasizes:**
    - **Plating as part of flavor design** – how where you place sauces and garnishes changes which flavors you get in each mouthful.
    - **Zero-waste cooking** – using all parts of ingredients, even "failed" elements, instead of throwing them away.
    - **Science of cooking** – for example, extracting and preserving green color and flavor by **blanching herbs then shocking them in ice water**, linking cooking to **chlorophyll and photosynthesis**.
- **Student takeaways:** Professional chefs can be both **highly creative and rigorously sustainable**, inspiring students to see cooking as science, art and environmental action at once.

🔬 Day 2 – Seeds, Farming, & Soil Science

4.1 Tulsi (Holy Basil) – Culture, Medicine, and Ritual

- A **herbalist** visits to teach about **Tulsi (holy basil)**:
    - Students learn about its medicinal properties and taste **Tulsi tea**.
    - They learn about its Cultural and spiritual significance, especially in Hindu tradition, where Tulsi plants are kept at home to **"wash away bad spirits"**.

- **Ethical harvesting** – students are asked to **"ask the plant"** before harvesting, embedding respect for living systems.

4.2 UNS Vertical Farm – Food in a Desert Climate

- Students visit the **UNS vertical farm**, a commercial indoor farm near the school.
- UNS Farms produces up to **1,500 kg of fresh produce per day** using hydroponics and up to 90% less water than conventional agriculture.
- **Key learnings:** In the UAE's **harsh desert climate**, food can still be grown locally using soilless systems and vertical racks.
- Students taste microgreens and edible flowers, including **Buzz buttons** (Szechuan buttons) – causing intense tingling sensations on the tongue.

4.3 Soil, Compost, and Mini-Gardens – Led by High-Schoolers

- A high-school SENA/CENA environmental group runs a **Project Green Challenge** workshop for the younger students.
- They learn that **soil types differ** and that in Dubai's mostly sandy soil, you must mix sand, soil, and **a small proportion of compost**.
- Students design and plant **their own mini-gardens**, choosing seeds and mixing soil, sand and compost themselves.
- This peer-to-peer teaching models **student leadership and mentorship**.
- Students emerge with a stronger sense that **growing food is labor-, time- and care-intensive**.

🍞 **Day 3 – Fermentation, Sourdough, and Gut Health**

- Day 3 centers on **fermentation** and **microbiology** through a workshop with **baker Sven**, who specializes in **sourdough bread**.
- **Key scientific and health concepts:** Long fermentation (around 48 hours) breaks down complex compounds, leaving **beneficial bacteria** that improve **digestibility** and support **gut health**.
- Students connect this to prior science lessons where they studied sourdough under microscopes: yeast and bacteria as **living organisms**.

- **Practical experience:** Students make and eat **sourdough breakfast pizzas**. Many notice they feel full but **"light,"** unlike with heavily processed white bread.
- The message is that **"good things take time"** – both fermentation and sustainable food systems require patience.

✨ **Design, Aesthetics, and Systems Model**

- **Art and Ceramics:** Students participate in a **ceramics project** creating bowls or plates. The teacher connects this to plating and restaurant design, emphasizing that sustainability can be embedded in **materials, décor, tableware and the entire dining experience**.
- **Michelin Green Star Restaurant:** Students visit a **Michelin Green Star sustainable restaurant in Dubai** (referred to as **"Table"**, closely aligned with venues like **Teible**).
    - **What they observe:** Local sourcing, on-site herb garden, and a **zero-waste philosophy** where trimmings and peels are **fermented and transformed** into new products like vinegars.
    - **Sustainable materials and design:** Ceilings and walls are made from **upcycled materials** such as date palm bark.
    - Students notice how **every decision** reflects an integrated **sustainability mindset**.

📈 **Impact on Students**

- **Skills they highlight:** Teamwork & responsibility, problem-solving & creativity, confidence & life skills, and respect for nature & food.
- **Why experiential learning "sticks" more:** Sensory memories (colors, textures, flavors, social moments) make the learning **memorable and emotional**, not just cognitive. You need to **touch, taste, see and do**.
- **Changes in habits & outlook:** Many plan to cook for their families using new techniques, be more mindful of gut health, and drink more **Tulsi tea**.

🔗 **Key Entities & URLs**

School & Core Program

- **American School of Dubai (ASD):** https://www.asdubai.org

Partners & Places

- **Food Nation:** https://foodnationme.com
- **UNS Farms:** https://unsfarms.com
- **Teible / "Table" (Michelin Green Star sustainable restaurant, Dubai):** https://www.teible.com