**Activity Analysis and Training Plan Report**

**1. Introduction**

This report presents workout plans for individuals in two weight groups: 130 pounds and 155 pounds. The focus is on creating personalized exercise schedules that optimize caloric burn and aid in weight loss. These workout plans are tailored more towards people who are into cardio based workouts. This includes heavier sports like swimming and running for the 130 lb. group, and martial arts based for the 155 lb. group. By analyzing the caloric expenditure of various activities, the goal is to help individuals in these weight categories achieve their fitness objectives effectively.

This analysis can be applied to fitness courses or personalized training plans, providing fitness instructors with data-driven recommendations. The plan considers different activity categories and paces to ensure a well-rounded approach, helping participants create a realistic 5000 calorie a week burn.

**2. PIVOT Analysis**

**Group 1: Subjects Averaging 130 Pounds**

This section displays a aquatic approach to burning 500 calories per week. The main calorie burning days are Tuesday, Thursday, and Saturday which involve different types of swimming exercises, and a run. On Monday, Wednesday, Friday, this consists of more leisure activities to allow the body time to rest. This workout plan provides a realistic exercise that meets the 500 calorie threshold, but does not completely destroy the body in high intensity workouts. View Table 1 below to see the full exercise plan. In table 2, it displays the average calories burned for each workout pace. That information can be viewed in Table 2 below. The SQL query can be found in the Appendix A section.

**Table 1: 130 lb. Workout Schedule**

**A calories burned list

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**Table 2: PIVOT Results for 130 lbs.:**

A close-up of a graph

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**Rationale for Plan:** This plan provides a balance between different paces and activity categories to ensure variety and optimal caloric burn. The activities include steady and vigorous sports, and high-intensity swimming and running, with an off day that allows the person to get the work done at home.

**Group 2: Subjects Averaging 155 Pounds**

This section provides a similar aquatic approach to burning 5000 calories per week for subjects averaging 155 pounds. The workout days remain the same, Tuesday, Thursday, and Saturday for high intensity workouts, but with slightly adjusted calorie burn estimates, given the higher weight of the subjects. This plan focuses more on Marshall arts, rather than swimming for the 130 lb. class. On Monday, Wednesday, and Friday, the plan consists of low-impact activities that allow the body to recover and rest. View Table 3 below to see the full exercise plan. In table 4, it displays the average calories burned for each workout pace. That information can be viewed in Table 4 below. The SQL query can be found in the Appendix B section.

**Table 3: 155 lb. Workout Schedule:**

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**Table 4: PIVOT Results for 155 lbs.:**

A close-up of a graph

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**Rationale for Plan:** For the 155 lbs. group, this plan also includes a good mixture of steady, vigorous, and high-intensity activities. The focus is on keeping the workouts more challenging for the individual to burn significant calories each week. Martial arts provide high intensity burn, while the days off are less intense.

**5. Conclusion**

**Threats to Validity:**

1. **Individual Variability**: The dataset averages caloric burn across individuals, but real-life results may vary based on factors such as fitness level, metabolism, and exercise form.
2. **Activity Accessibility**: Not all activities may be feasible for every individual, especially for those with mobility or health issues. The dataset assumes that all recommended activities are universally available to everyone, which might not be true.

**6. Appendix**

**SQL Queries Used for PIVOT Analysis:**

1. **Query for Group 1 (130 lbs.)**:

Table 1: A screenshot of a computer program

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Table 2:

A screenshot of a computer program

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1. **Query for Group 2 (155 lbs.)**:

Table 3: A screenshot of a computer program

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Table 4: A screenshot of a computer program

AI-generated content may be incorrect.